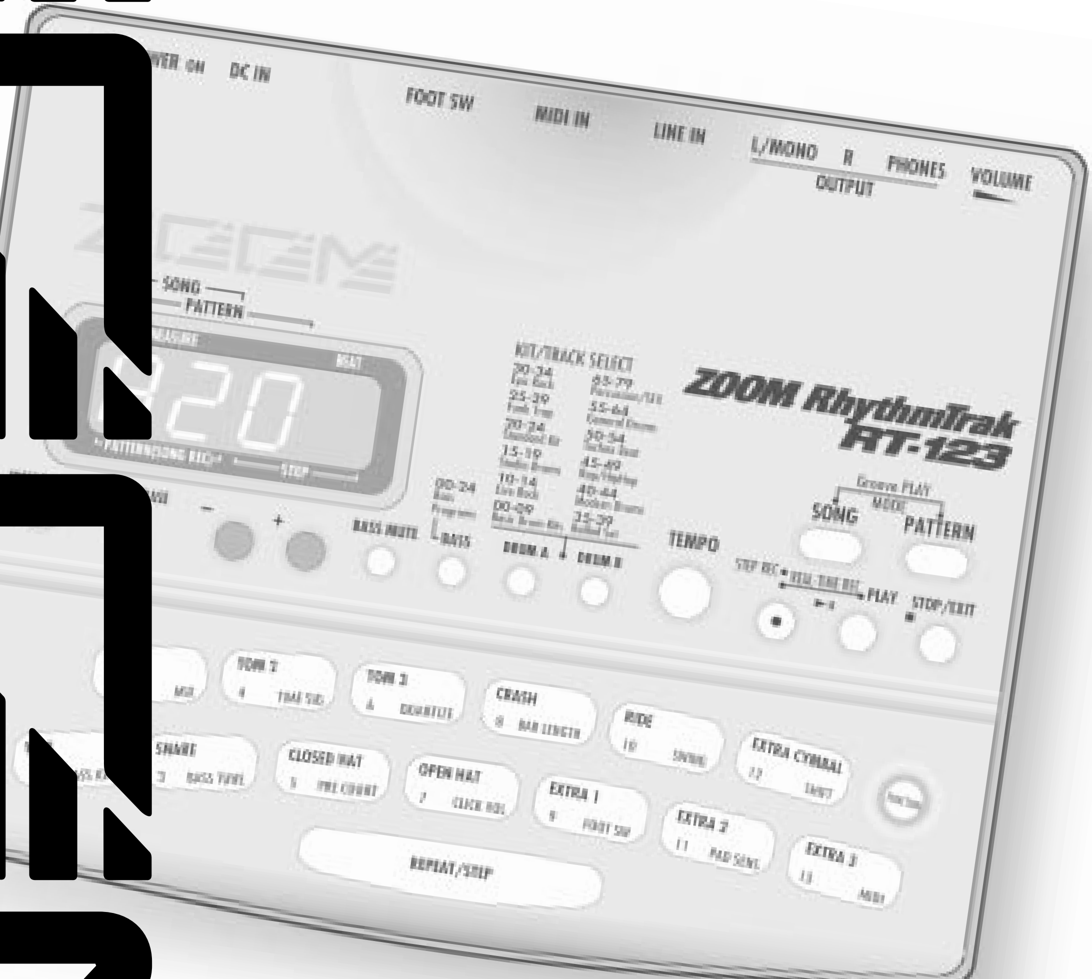
ZOOM RhythmTrak RT-123



OPERATION MANUAL

USAGE AND SAFETY PRECAUTIONS

In this manual, symbols are used to highlight warnings and cautions for you to read so that accidents can be prevented. The meanings of these symbols are as follows:

⚠ Warning	This symbol indicates explanations about extremely dangerous matters. If users ignore this symbol and handle the device the wrong way, serious injury or death could result.
⚠ Caution	This symbol indicates explanations about dangerous matters. If users ignore this symbol and handle the device the wrong way, bodily injury and damage to the equipment could result.

Please observe the following safety tips and precautions to ensure hazard-free use of the RT-123.

⚠ Warning

• Power requirements

The RT-123 is powered by the supplied AC adapter. To prevent malfunction and safety hazards, do not use any other kind of AC adapter.

When using the RT-123 in an area with a different line voltage, please consult your local ZOOM distributor about acquiring a proper AC adapter.

⚠ Caution

• Environment

Avoid using your RT-123 in environments where it will be exposed to:

- Extreme temperature
- High humidity or moisture
- Excessive dust or sand
- Excessive vibration or shock

⚠ Caution

• Handling

The RT-123 is a precision instrument. Do not exert undue pressure on the keys and other controls. Also take care not to drop the unit, and do not subject it to shock or excessive pressure.

⚠ Caution

• Alterations

Never open the case of the RT-123 or attempt to modify the product in any way since this can result in damage to the unit.

⚠ Caution

• Connecting cables and input and output jacks

You should always turn off the power to the RT-123 and all other equipment before connecting or disconnecting any cables. Also make sure to disconnect all cables and the AC adapter before moving the RT-123.

Usage Precautions

• Electrical interference

For safety considerations, the RT-123 has been designed to provide maximum protection against the emission of electromagnetic radiation from inside the device, and protection from external interference. However, equipment that is very susceptible to interference or that emits powerful electromagnetic waves should not be placed near the RT-123, as the possibility of interference cannot be ruled out entirely.

With any type of digital control device, the RT-123 included, electromagnetic interference can cause malfunctioning and can corrupt or destroy data. Care should be taken to minimize the risk of damage.

• Cleaning

Use a soft, dry cloth to clean the RT-123. If necessary, slightly moisten the cloth. Do not use abrasive cleanser, wax, or solvents (such as paint thinner or cleaning alcohol), since these may dull the finish or damage the surface.

Please keep this manual in a convenient place for future reference.

CONTENTS

Introduction

Thank you for selecting the ***ZOOM RhythmTrak RT-123*** (hereafter simply called the ***"RT-123"***).
The RT-123 is a rhythm machine with the following features and functions.

- Functionality of RhythmTrak 234 in a compact body. Play cool backing patterns made up of two drum tracks and one bass track. 297 preset patterns provide a wide variety of popular rhythms. 99 additional patterns can be programmed and stored by the user.

- Create a backing sequence (song) with up to 99 patterns. As many as 99 songs can be stored.

- Self-lighting pads indicate when sound is produced. While playing patterns or songs, you can check the rhythm visually as well.

- Choose from a variety of 105 built-in super-realistic drum and bass sounds. Practice parts as if you were playing in a band. Also great for making guitar or keyboard demo tapes.

- LINE IN jack allows connection of external instruments. Mix the sound from an instrument processed by a multi-effect such as the ZOOM 503 with the backing sound provided by the RT-123.

- Simple and intuitive controls make it a snap to operate the RT-123 even if you have never used a drum machine or sequencer before.

- Groove play mode allows changing patterns during play simply by tapping pads on the unit. Great for live performances and for DJ use.

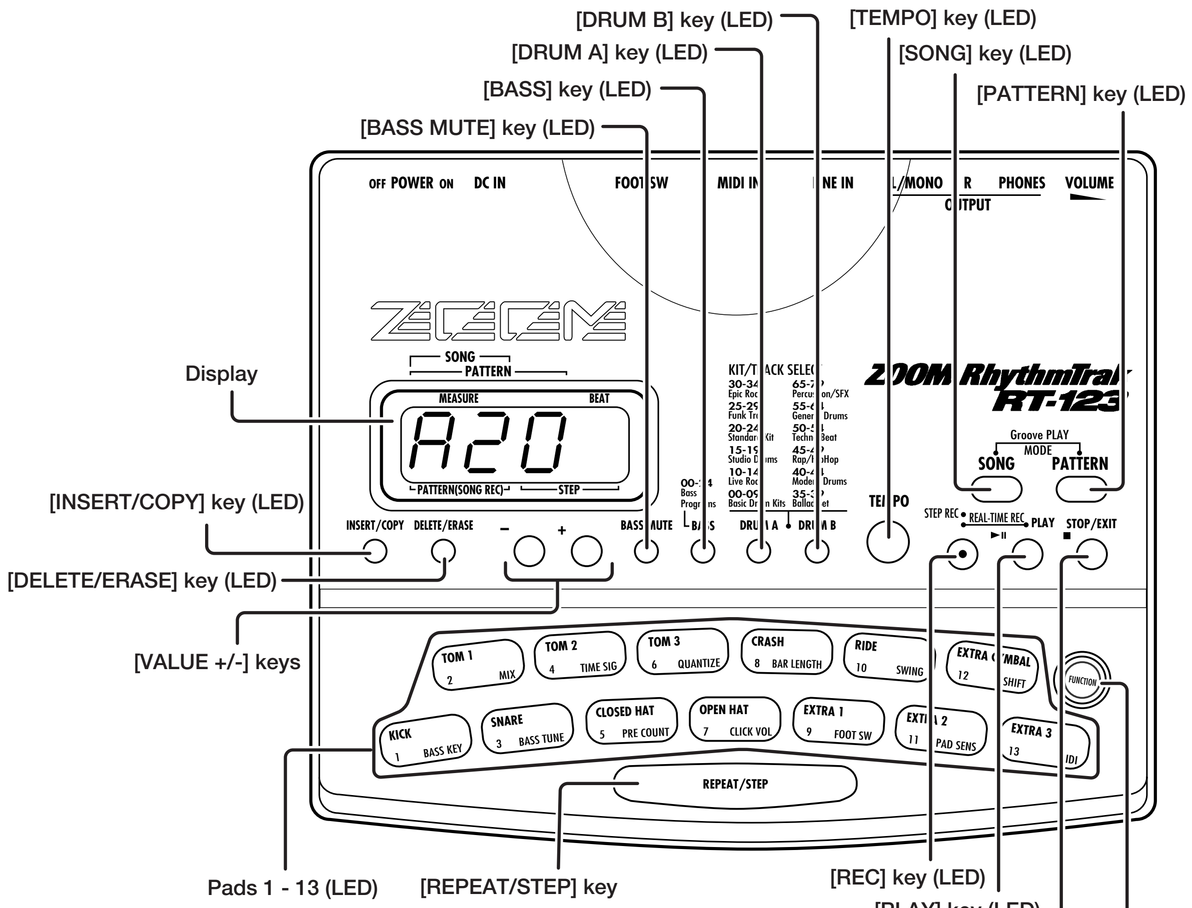
- Optional foot switch FS01 allows pattern start/stop control or tempo switching. You can also operate an assigned sound such as bass drum or open/closed hi-hat.

- MIDI IN connector allows synchronization with external MIDI sequencer or control of the RT-123 from other MIDI equipment.

Please take the time to read this manual carefully so as to get the most out of your RT-123 and to ensure optimum performance and reliability. Retain this manual, the warranty card and all other documentation for future reference.

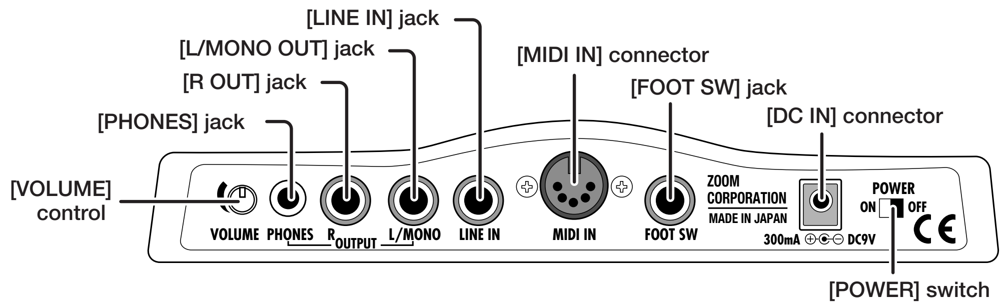
Names of Parts

Top Panel



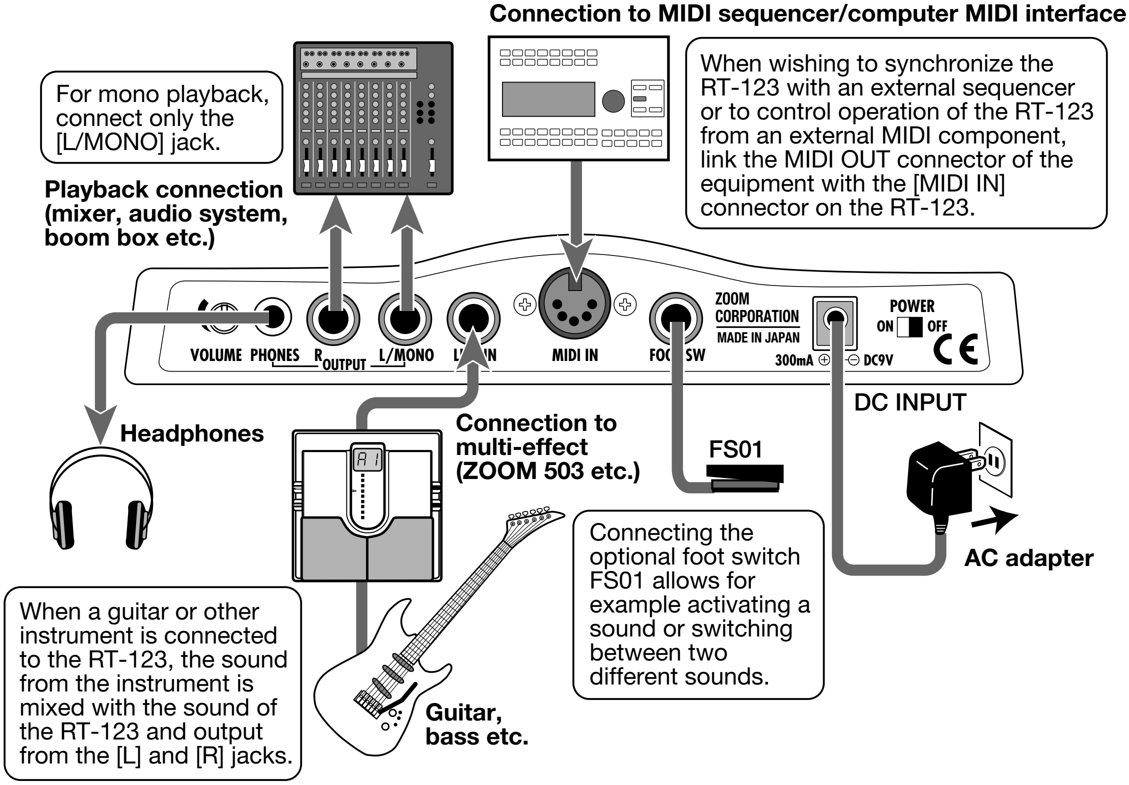
Keys marked (LED) have an integrated LED that causes the key to light up.

Rear Panel



Names of controls and connectors on the top panel and rear panel are enclosed in angle brackets in this manual.

Getting Connected



Preparations

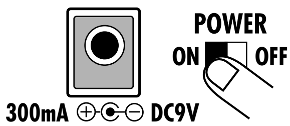
After connections are established, check the sound by performing the following steps.

STEP 1 While the playback system is still turned off and the volume is fully turned down, double-check whether all connections have been made correctly.

If cables are plugged in while power is turned on, or if the system is turned on with the volume control turned up, speaker damage may occur.

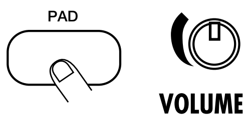
STEP 2 Turn power to the RT-123 on.

Connect the supplied AC adapter to the [DC IN] connector and set the [POWER] switch to ON.



STEP 3 Turn power to the playback system on.

While tapping a pad to produce sound, adjust the [VOLUME] control of the RT-123 and the volume control on the playback system to a suitable position.



Quick Guide

This Quick Guide shows how to operate your RT-123, using a few representative examples. Some of terms and concepts used in this manual are also explained here.

Quick Guide (1) Listening to the Demo

RT-123 comes with a demo song already built in. Hear for yourself what RT-123 can do.

❶ Connect RT-123 to the playback system and turn the power on.

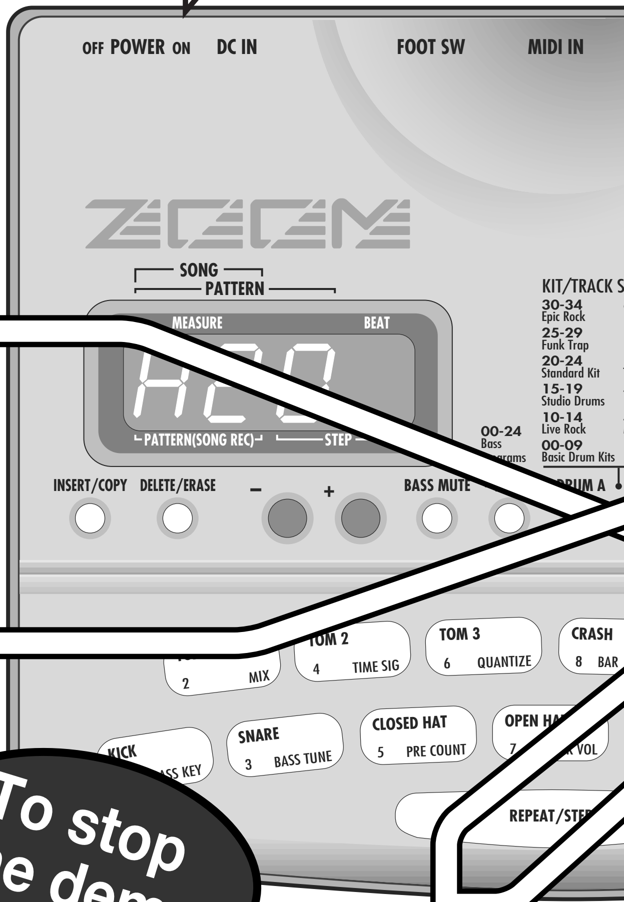
❷ Press the [FUNCTION] key.

Verify that the LED of the [FUNCTION] key flashes.

❸ Press the [SONG] key.

The demo song starts.

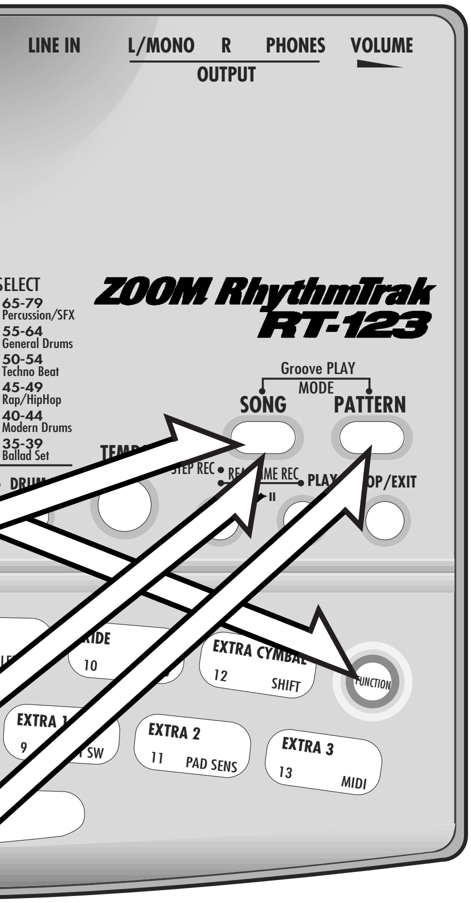
Sounds just like the backup of a live band, doesn't it? Note how effectively various drum, percussion, and bass sounds are combined. RT-123 can produce such a great variety of sounds with ease.



To stop the demo

❹ Press the [PATTERN] key or [SONG] key.

Quick Guide

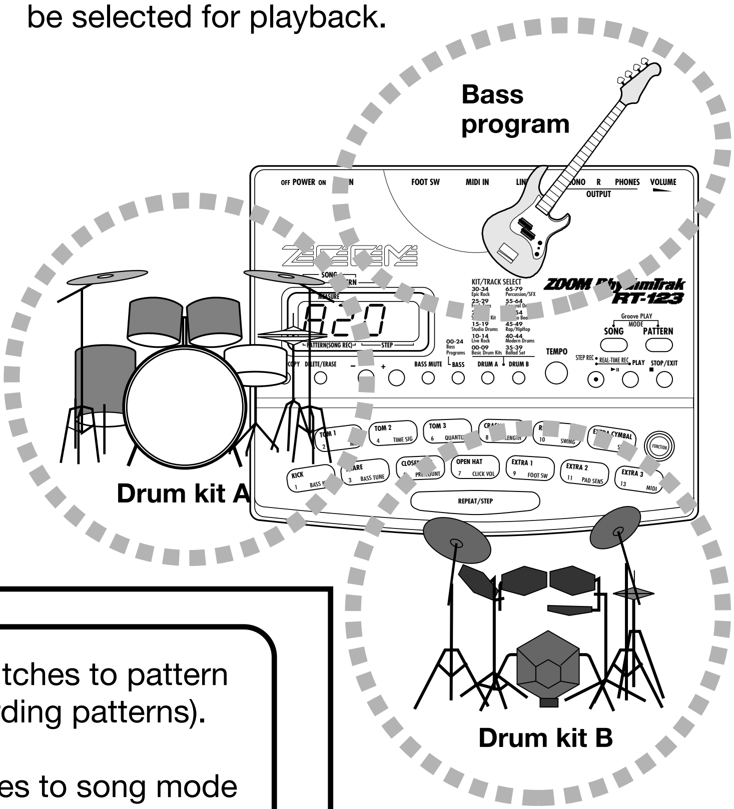


• [PATTERN] key: RT-123 switches to pattern mode (for playing and recording patterns).

• [SONG] key: RT-123 switches to song mode (for creating backing songs which are sequences of patterns).

Drum kits and bass programs

The backup sound provided by the RT-123 consists of up to two drum kits and one bass program. A drum kit is a collection of drum sounds including bass drum, snares, and tom-tom, percussion sounds such as congas and bongos, and various other effect sounds. These are combined to create backing tracks for a wide range of music genres. The RT- 123 comes with 80 preprogrammed drum kits of which up to two can be used simultaneously. A bass program is a bass sound such as electric bass, acoustic bass, synthesizer bass, etc. 25 types of bass programs are available, of which one can be selected for playback.



Quick Guide (2) Playing the Pads

The top panel of the RT-123 has 13 pads which serve to play drum kits and bass programs.

❶ Turn the power on.

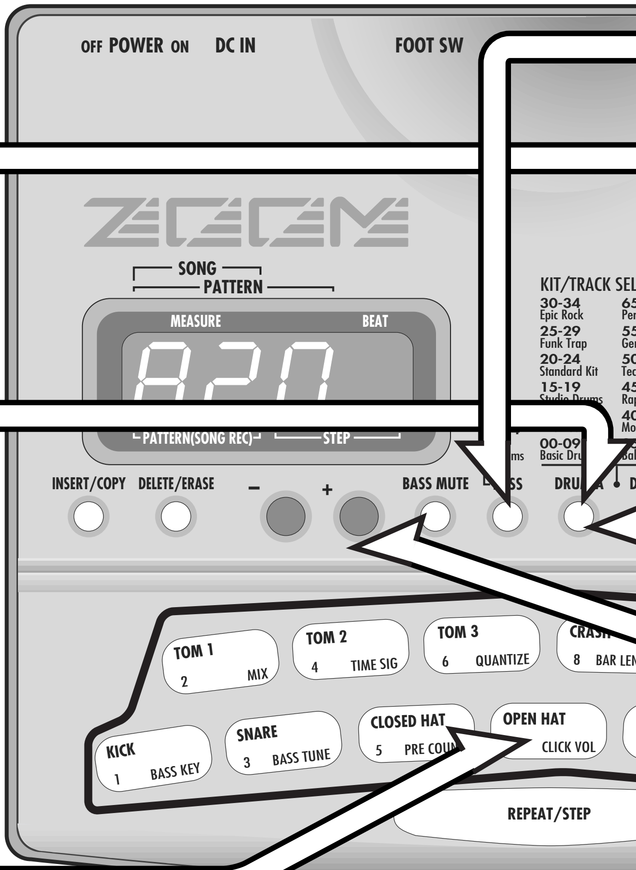
❷ Press the [PATTERN] key.

The [PATTERN] key LED lights up and the RT-123 is in pattern mode.

❸ Press the [DRUM A] key.

The [DRUM A] LED lights up. Now you can use the pads to play the drum kit.

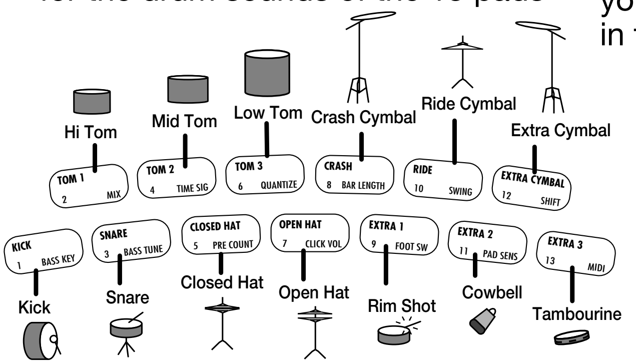
HINT *You can also select the [DRUM B] key to play a different drum kit.*

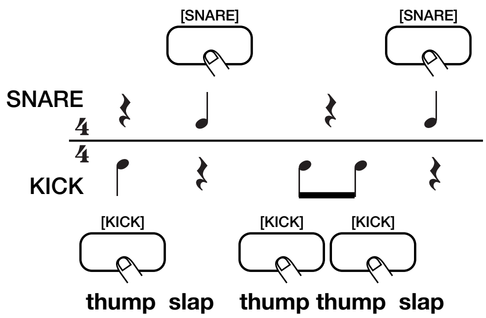


❹ Tap the pads.

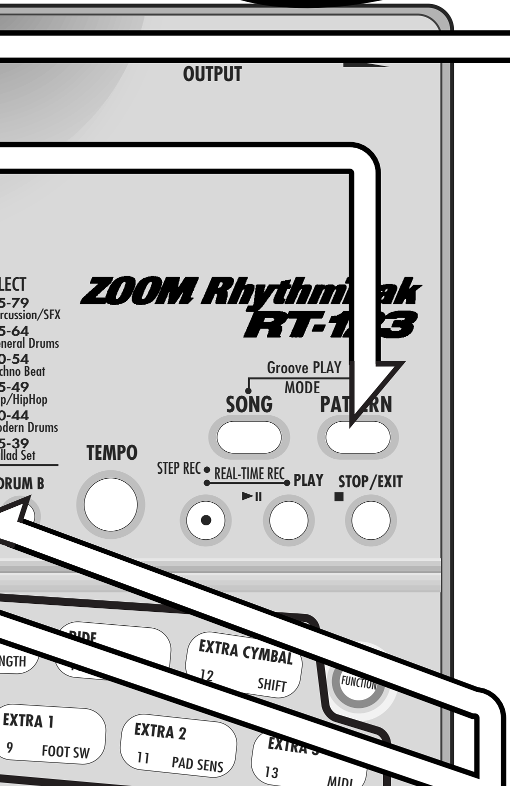
You will notice that the pads produce various drum sounds. The 13 pads are assigned different sounds, depending on the drum kit or bass program that has been selected. The illustration below shows an example for the drum sounds of the 13 pads with a drum kit.

By tapping for example pad 1 (KICK) and pad 3 (SNARE) as in the illustration below, you can play bass drum and snare drum in the rhythm as shown.





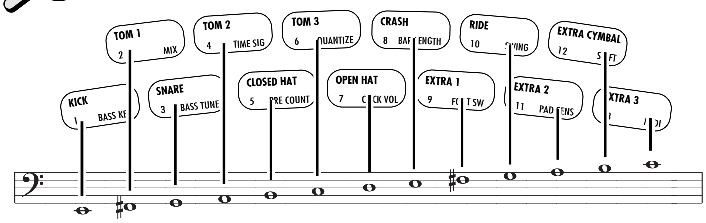
To play a bass program with the pads



❻ Press the [BASS] key.

The [BASS] key LED lights up and the current bass program can be played with the pads. Give it a try ! You will notice that different pads produce sound of a different pitch.
Unlike with the drum kit, the bass program does not consist of different instrument sounds. Rather, one type of bass sound is varied in pitch. You can use the 13 pads like the keys of a keyboard.
The illustration below shows an example for the notes produced by the 13 pads with a bass program.

HINT *You can also shift the pitch of each pad (→ p. 24).*



NOTE *Which sound is assigned to the pads depends on the pattern.*

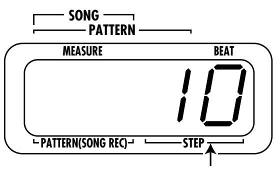
To change the drum kit



When a user pattern is selected (display shows U00 - U99; for details see page 12), the drum kit played by the pads can be changed.

❺ Press and hold the [DRUM A] key...

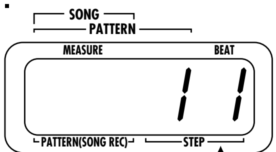
While the [DRUM A] key is being pressed, the display shows the currently selected kit number (0 - 79).



Kit number

Press the [VALUE +/-] keys.

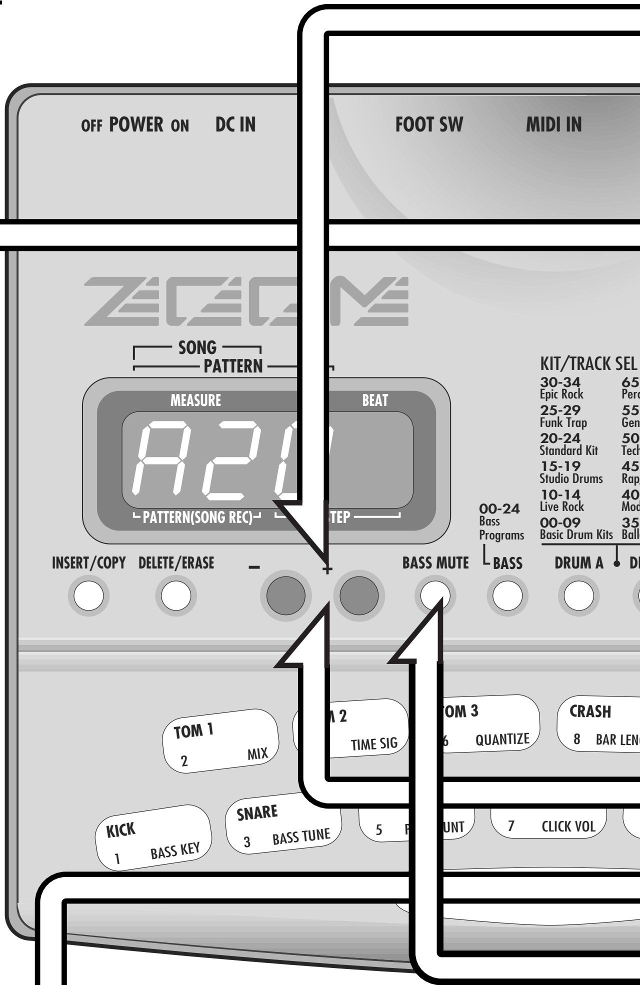
- [+] key: Selects the next higher kit number.
- [-] key: Selects the next lower kit number.



Kit number

Quick Guide (3) Playing a Pattern

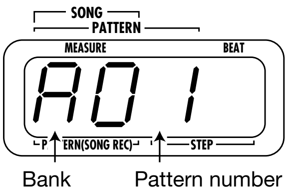
The RT-123 already contains many preprogrammed patterns (backing sequence of several bars). Each pattern combines up to two drum kits and a bass program. Here's how you can play a pattern.



❶ Turn the power on.

❷ Press the [PATTERN] key.

The [PATTERN] key LED lights up and the RT-123 is in pattern mode. The display shows the currently selected bank and pattern number.



There are four banks, each with 99 patterns (01 - 99), resulting in a total of 396 patterns.

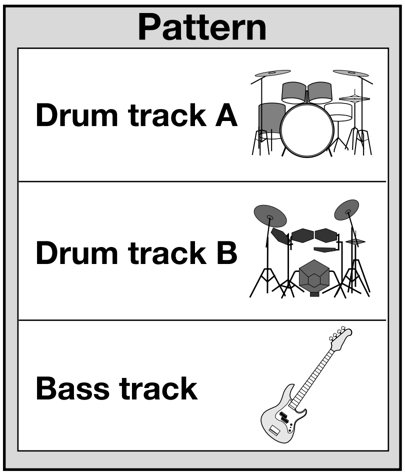
- Banks A - C: Read-only patterns (preset patterns)
- Bank U: Read/write patterns (user patterns)

In the factory default condition, the user patterns are empty.

❸ Press the [PLAY] key (►II) .

Playback of the currently selected pattern starts.

The patterns of the RT-123 can be thought of as "recordings" of up to 2 drum kits and 1 bass program. These are recorded on tracks that are combined to form the pattern. A pattern of the RT-123 therefore consists of drum track A, drum track B, and the bass track. Drum tracks A and B contain drum kit recordings and the bass track a bass program recording.



Quick Guide

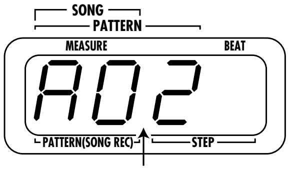
To change the pattern

❹ Press one of the [VALUE +/-] keys.

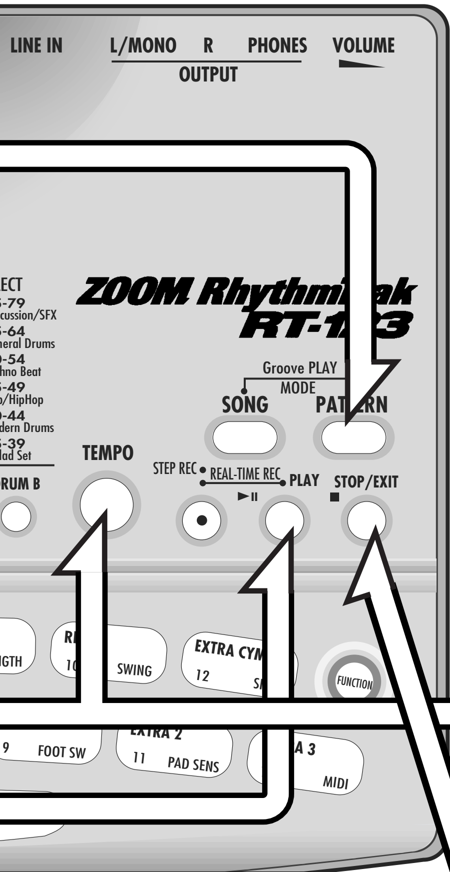
- [+] key: Selects next higher pattern number.
- [-] key: Selects next lower pattern number.

For example, repeatedly pressing the [VALUE +] key will switch the pattern in the order A01 → A99 → B01 → B99 → C01 → C99 → U01 → U99.

HINT *By pressing the [FUNCTION] key and then the [VALUE +/-] key, you can switch banks in the order A05 → B05 → C05 → U05 .*



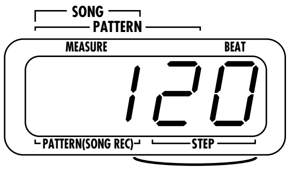
Pattern number



To change the tempo

❺ Hold the [TEMPO] key...

While the [TEMPO] key is held down, the display shows the currently active tempo.

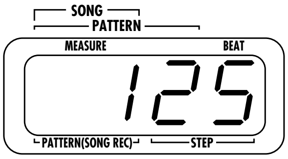


Tempo value (BPM)

Press the [VALUE +/-] key.

- [+] key: Increases the tempo value.
- [-] key: Decreases the tempo value.

HINT *You can also tap the [TEMPO] key twice in the interval corresponding to the desired tempo (→ p. 19).*



To mute the bass sound

❻ Press the [BASS MUTE] key once.

Press the key once more to turn the bass on again.

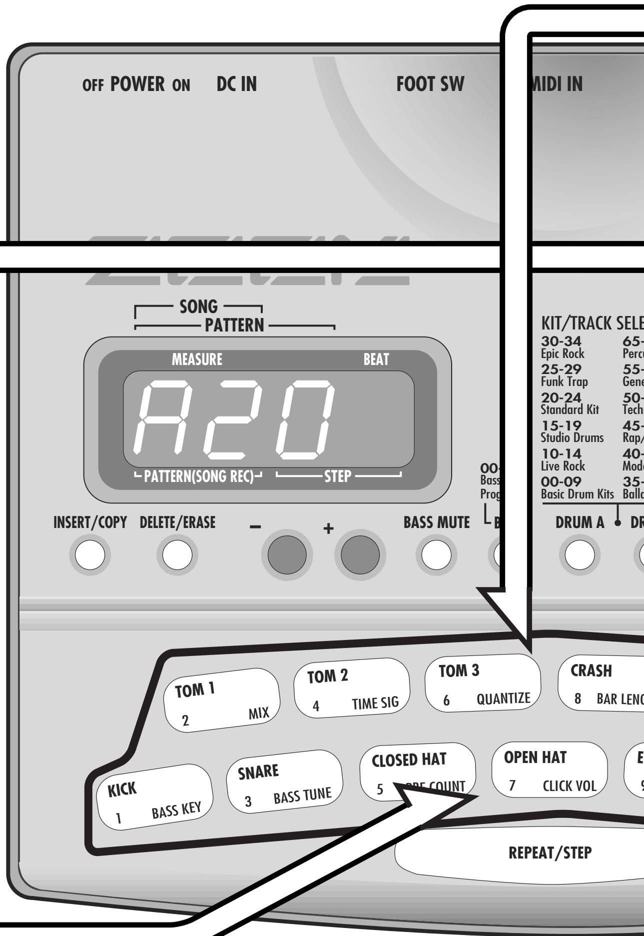
HINT *You can also shift the pitch of the entire bass track (→ p. 24).*

To stop pattern play

❼ Press the [STOP/EXIT] (■) key.

Quick Guide (4) Using Groove Play

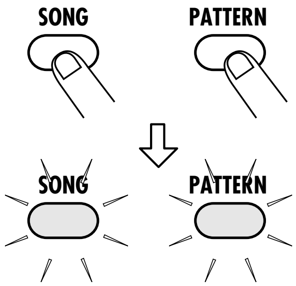
Groove play is a special feature of the RT-123 which lets you switch among various patterns simply by tapping the pads. This makes it easy to play with patterns like a DJ spinning records.



❶ Turn the power on.

❷ Press the [SONG] key and [PATTERN] key together.

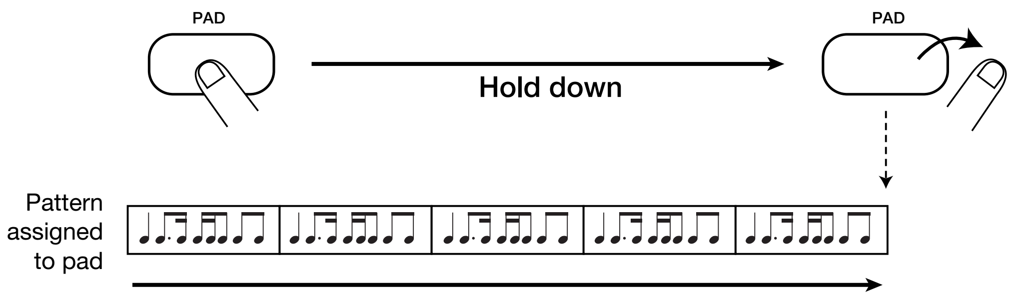
The [SONG] key LED and [PATTERN] key LED light up, and the RT-123 is in groove play mode.



❸ Push a pad.

While the pad is held down, the pattern assigned to that pad is played. Give it a try and check out which patterns are assigned to the various pads.

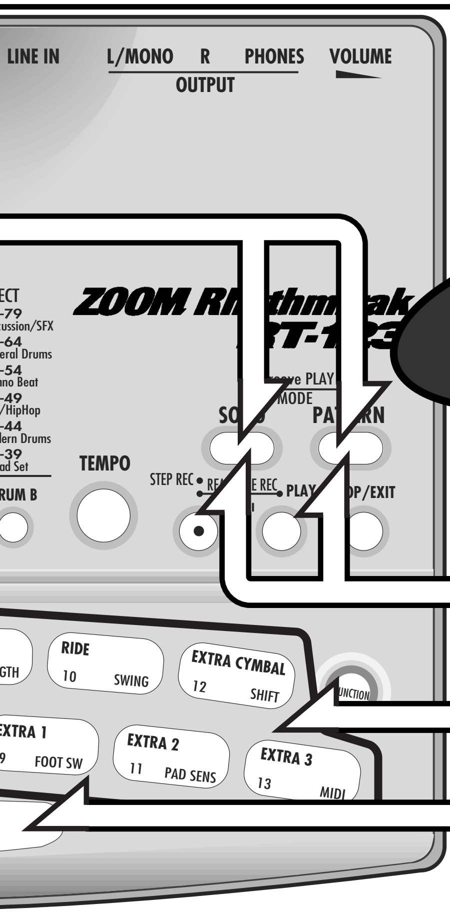
HINT *The pattern assigned to a pad can be changed (→ p. 41).*



To play multiple patterns simultaneously

❺ Push several pads together.

In groove play mode, up to 4 patterns can be played simultaneously. For example, while playing a basic drum pattern, you can hit another pad to overlay a bass pattern and then add a snare fill-in. By using the right timing when pushing the pads, you can create complex rhythms.



To stop groove play

❻ Press the [SONG] key or [PATTERN] key.

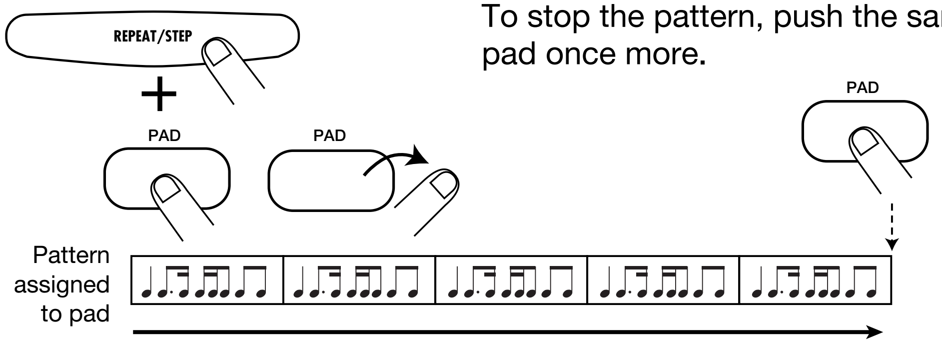
- [PATTERN] key was pressed:
  RT-123 switches to pattern mode.

- [SONG] key was pressed:
  RT-123 switches to song mode.

To keep playing the pattern without pressing the pad

❹ Hold the [REPEAT/STEP] key down while pushing the pad.

The pattern will continue to play also when the pad is released.
This is useful for example to keep on playing a basic drum pattern.
To stop the pattern, push the same pad once more.

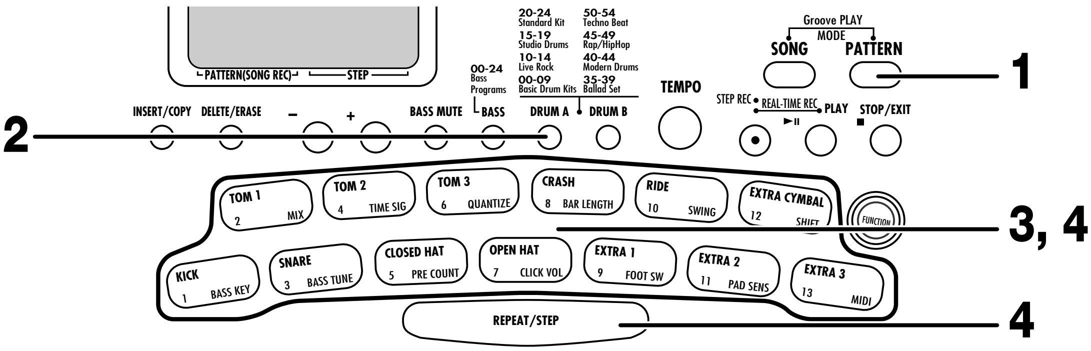


Playing the Pads (Manual Play)

The RT-123 lets you not only play back existing patterns and songs, it also allows you to manually play the unit by tapping the pads. This section describes how to manually play the unit.

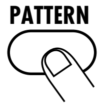
Playing by tapping the pads

The RT-123 assigns various sounds to the pads, depending on the currently selected drum kit. Play the pads to discover the realistic sounds offered by the RT-123.



STEP 1 Press the [PATTERN] key.

This activates the pattern mode. The [PATTERN] key LED lights up.



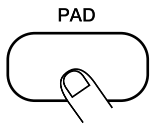
STEP 2 Press the [DRUM A] key.

During manual play, you use the [DRUM A] key, [DRUM B] key, and [BASS] key to select the desired drum kit or bass program. (The LED of the selected key lights up.) Pressing the [DRUM A] or [DRUM B] selects drum kit A or B. Pressing the [BASS] key selects the bass program. In this example, let's use drum kit A.



STEP 3 Tap one of the pads.

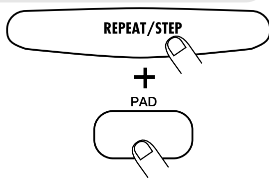
The LED of the pad lights up briefly and the sound assigned in the drum kit to that pad is heard. The volume changes according to how strongly you tap the pad.



> **HINT** *When the [BASS] key is pressed in step 1, a bass program can be played, but there is a difference in how the pads operate. With a drum kit, the sound plays through even if the pad is released immediately. With a bass program, the sound continues only as long as the pad is pressed.*

STEP 4 Tap a pad while holding the [REPEAT/STEP] key down.

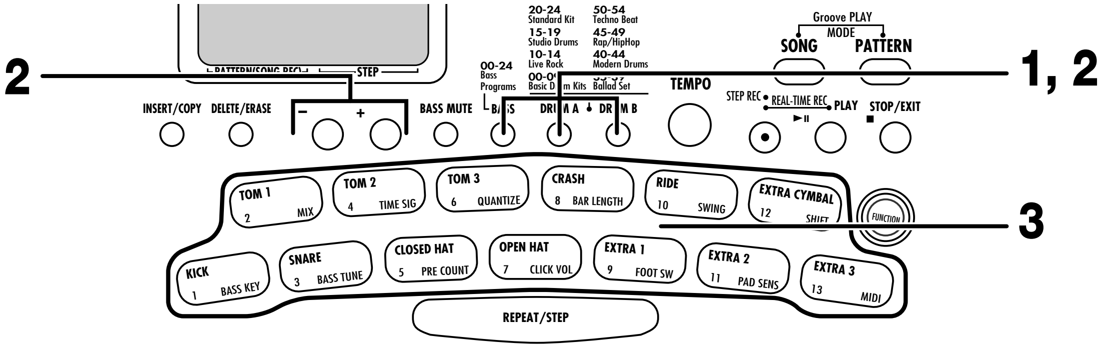
The sound will be produced continuously for as long as the pad is pressed. The repetition speed depends on the tempo.



> **HINT** *You can adjust the interval for repeated play. See the "Quantize" section on page 46.*

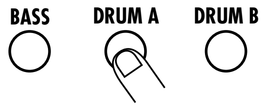
Selecting a kit/program for manual play

For manual play, you can select among 80 drum kits and 25 bass programs to create your own combinations.



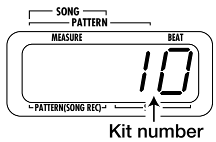
STEP 1 Press one of the [DRUM A], [DRUM B], or [BASS] keys to select the track, and hold the key down.

The current kit/program number is shown on the display.



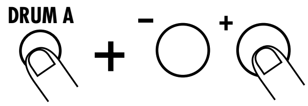
HINT *Available drum kit types are printed on the panel.*

NOTE *Only kits and programs from the user pattern area can be changed. Kits and programs from the preset pattern area cannot be changed.*



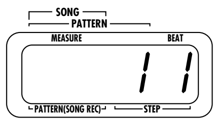
STEP 2 While holding the key selected in step 1 down, use the [VALUE +/-] keys to select a kit/program.

The [VALUE +/-] keys switch the kit number shown on the display by 1 up or down, and the selected kit/program changes accordingly.

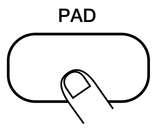


HINT

- *Keeping a [VALUE +/-] key depressed changes numbers continuously.*
- *To change numbers quickly, hold one of the [VALUE +/-] keys depressed and press the other key. The numbers will change continuously.*



STEP 3 Tap the pads to check the sound of the new kit/program.

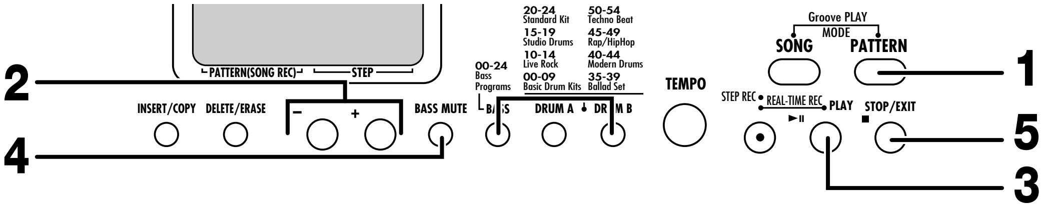


Playing the Patterns (Pattern Mode)

This section describes how to play patterns that are built into the RT-123 or that have been recorded by the user.

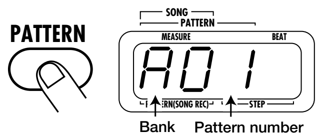
Pattern play

The RT-123 incorporates 297 preset patterns (A01 - A99, B01 - B99, C01 - C99) which cannot be changed by the user, as well as 99 user-definable patterns (U01 - U99). (The unit is shipped with the user patterns blank.) This section describes how to select and play a pattern.



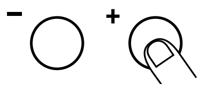
STEP 1 Press the [PATTERN] key so that the LED lights up.

The RT-123 switches to pattern mode and the number of the currently selected pattern is shown on the display. A01 - A99, B01 - B99, C01 - C99 indicates a preset pattern, and U01 - U99 a user pattern. If an empty user pattern was selected, the display shows "E" (Empty).



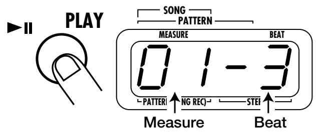
STEP 2 Use the [VALUE +/-] keys to select the desired pattern number.

In pattern mode, the [VALUE +/-] keys serve to switch the pattern.



STEP 3 Press the [PLAY] key.

The [PLAY] key LED lights up, and the pattern is played repeatedly. The [TEMPO] key LED flashes according to the tempo of the pattern. The display shows the current position in the pattern (measure/beat).



HINT
- *Also while playing a pattern, you can use the pads for manual play.*
- *Also while playing, you can switch the bank and number. In this case, the new pattern starts playing as soon as you make the switch.*

STEP 4 To mute only the bass track, press the [BASS MUTE] key.

The LED of the key lights up and only the drum tracks A/B are heard. To turn the bass track back on, press the [BASS MUTE] key once more.



HINT
- *Also while the bass track is muted, you can play bass programs manually with the pads. To do this, press the [BASS] key so that the LED of the key is lit.*
- *The bass track can be muted also while the pattern is stopped.*

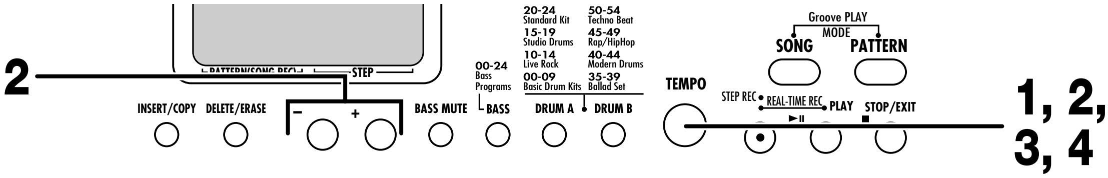
STEP 5 Press the [STOP/EXIT] key when you want to stop the pattern.

Pressing the [PLAY] key instead of the [STOP/EXIT] key sets the unit to pause mode. The [PLAY] key LED flashes. Pressing the [PLAY] key again in this condition resumes playback from the point where it was paused.



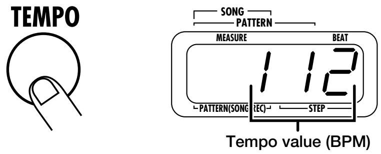
Changing the tempo of pattern playback

When playing a pattern in pattern mode, the playback tempo for the pattern can be varied over the range of 40 - 250 BPM (BPM = beats per minute, using quarter notes).

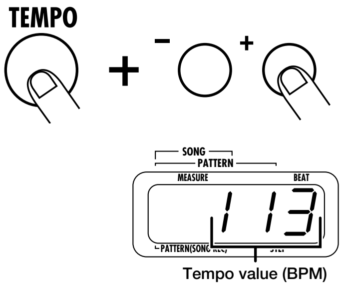


STEP 1 Press the [TEMPO] key.

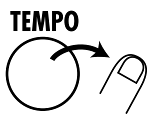
The display shows the current tempo for about 2 seconds.



STEP 2 While holding the [TEMPO] key down, use the [VALUE +/-] keys to change the tempo.

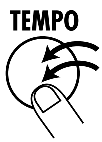


STEP 3 When the tempo has been set to the desired value, release the [TEMPO] key.



STEP 4 To input the tempo for manual play, tap the [TEMPO] key twice in the desired interval (tap tempo input).

While a pattern is paused or playing, the [TEMPO] key can be tapped twice to input a quarter note interval. When creating a pattern, this makes it easy to set the desired tempo.



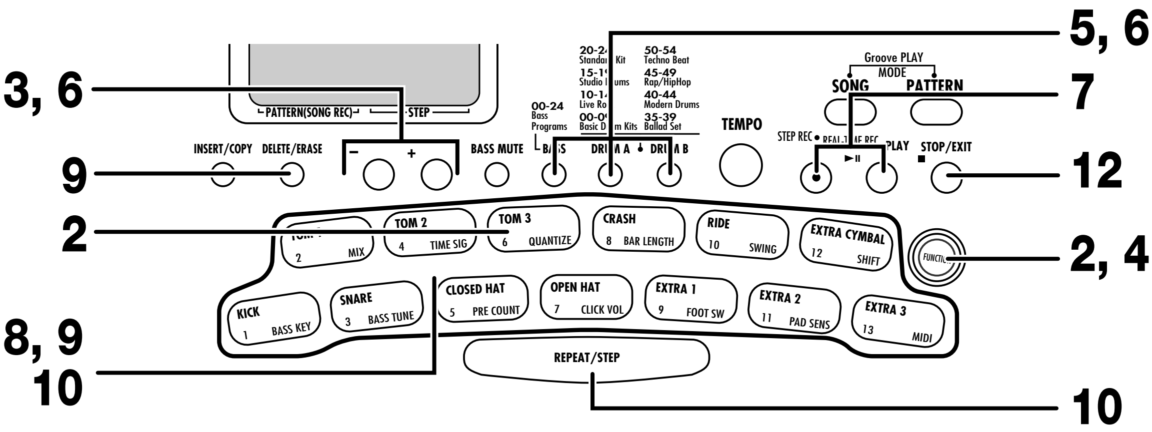
NOTE *The tempo set in pattern mode applies to all patterns. It cannot be changed for an individual pattern.*

Pattern Recording (Real-Time Recording)

The RT-123 has 99 user pattern slots which can be filled with your own patterns. Creating and recording a pattern is possible in two ways: by actually playing the pattern on the pads (real-time recording), or by entering each sound individually (step recording). The procedure for real-time recording of a drum track and bass track is described below.

Real-time recording of a drum track

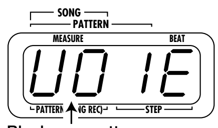
Real-time recording refers to the process of playing the pads while listening to a metronome sound and recording what you play. First, let's record drum tracks in real time.



STEP 1 In pattern mode, select an empty user pattern (U01 - U99), and select a drum kit if desired.

When a pattern that contains nothing is selected, the display shows only "E".

NOTE *You cannot record over a preset pattern.*

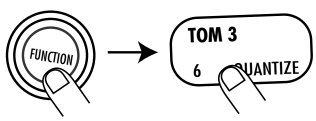


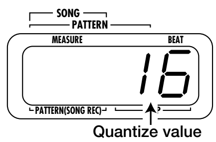
Blank user pattern

STEP 2 Press the [FUNCTION] key and then pad 6 (QUANTIZE).

The display shows the current quantize setting. Quantization refers to the degree of detail with which notes are recorded. By setting the quantize value to the shortest note that you want to use for the pattern, recording can be carried out while automatically maintaining precise timing. You can also turn the quantize function off, to retain the human touch that is characterized by slightly irregular timing.

HINT *The [FUNCTION] key is used to make various settings for the RT-123. For details, please refer to page 43.*

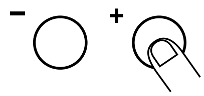




Quantize value

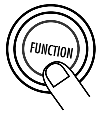
STEP 3 Use the [VALUE +/-] keys to set the quantize value (shortest note to be recorded).

4	Quarter note	24	Sixteenth triplet note
8	Eighth note	32	Thirty-second note
12	Eighth triplet note	48	Thirty-second triplet note
16	Sixteenth note	Hi	Quantize function off



STEP 4 Press the [FUNCTION] key once more.

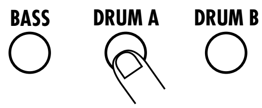
The new quantize value is set and the unit returns to the pattern mode.



> **HINT** *After recording is completed, it is also possible to change the quantize value and record again on the same track. For example, after recording bass drum and snare drum using quarter notes, you may want to record a hi-hat sequence with sixteenth notes.*

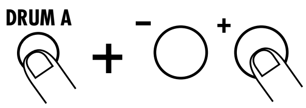
STEP 5 Select the track on which to record by pressing the [DRUM A], [DRUM B], or [BASS] key. The keys select drum track A, drum track B, or the bass track.

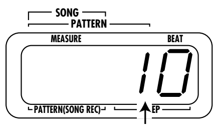
In this example, select the [DRUM A] key. By hitting the pads in this condition, you can check the sound of the drum kit assigned to drum track A.



STEP 6 While holding down the key selected in step 5, use the [VALUE] +/- keys to select the kit number.

The kit/program assigned to the track can be changed freely. While the [DRUM A] key is held down, the currently selected kit number is shown on the display. This can be changed with the [VALUE +/-] keys.





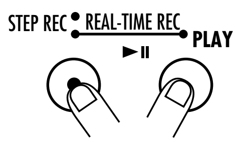
Kit number

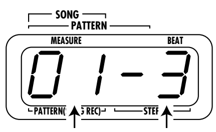
> **HINT**
> - *Keeping a [VALUE +/-] key depressed changes numbers continuously.*
> - *To change numbers quickly, hold one of the [VALUE +/-] keys depressed and press the other key. The numbers will change continuously.*
> - *The kit/program for a track can be changed also after the pattern was recorded. It can also be switched while the pattern is playing.*
> - *When the kit/program is changed for a user pattern, the pattern will be automatically stored with that kit/program.*

> **NOTE** *The kit/program of a preset pattern cannot be changed.*

STEP 7 While holding the [REC] key down, press the [PLAY] key.

The [REC] key LED and [PLAY] key LED light up and the [TEMPO] key LED flashes according to the tempo. The metronome sound starts.



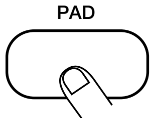


Measure Beat

> **HINT** *If not specified otherwise, an empty pattern is set to a beat of 4/4 and a length of 2 measures. These settings can be changed, as described on page 46–47.*

STEP 8 Tap the pads in accordance with the metronome sound.

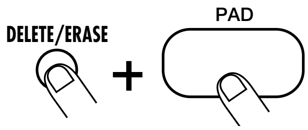
The sound of the respective pad is heard, and it is recorded for the duration set with the quantize value. You can verify the current position in the pattern by checking the display. When the end of the pattern is reached, the recording loops back to the beginning and continues, allowing you to add to the recording as often as desired.

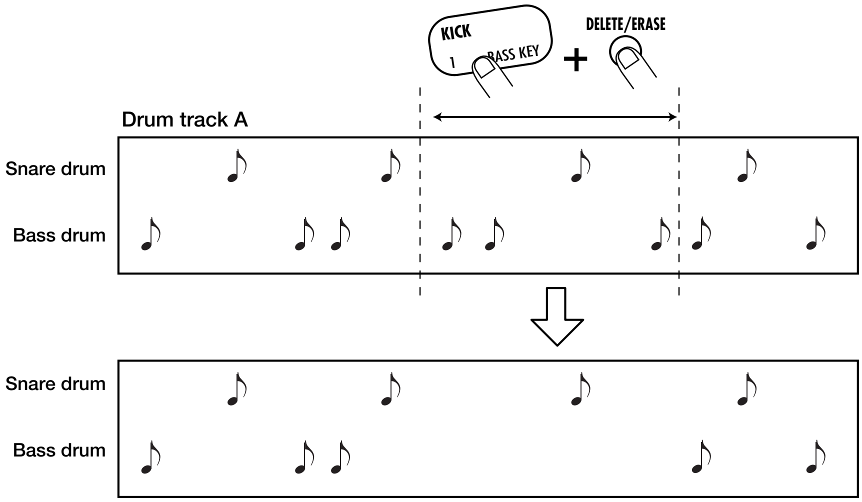


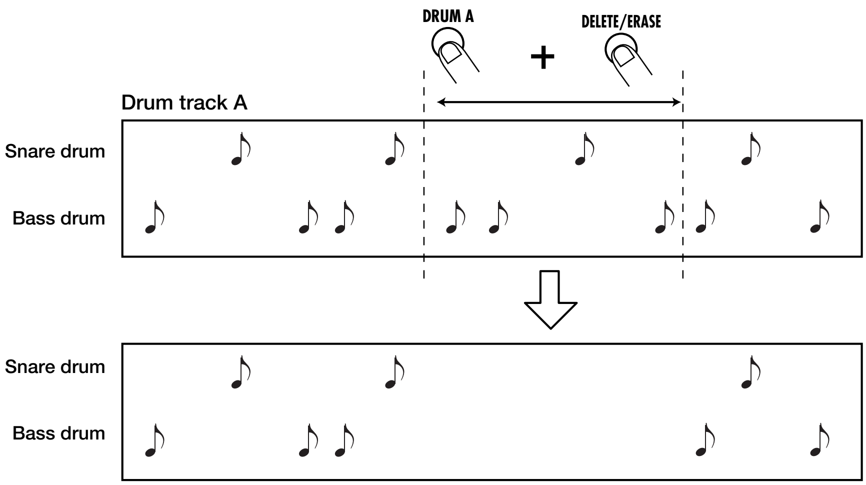
> **HINT**
> *When the [REC] key is pressed during real-time recording, the [REC] key LED starts to flash and pattern recording is suspended. In this condition, tapping the pads will produce sound, but it is not recorded. This is useful to check phrasing and sound before actually recording. To resume recording, press the [REC] key once more.*

STEP 9 To erase the sound from a specific pad, push the pad while holding the [DELETE/ERASE] key down.

While the key is held down, the sound from that pad is erased from the pattern. To erase the entire track, push the [DRUM A], [DRUM B], or [BASS] key while holding the [DELETE/ERASE] key down. While both keys are held down, all sounds in that track are erased.

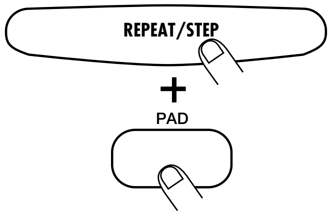






STEP 10 Tap the pads while holding the [REPEAT/STEP] key down.

By holding the [REPEAT/STEP] key down while hitting a pad, a percussion sound can be recorded.



STEP 11 Record drum track B using the same procedure.

STEP 12 When recording is completed, press the [STOP/EXIT] key.

Recording stops.

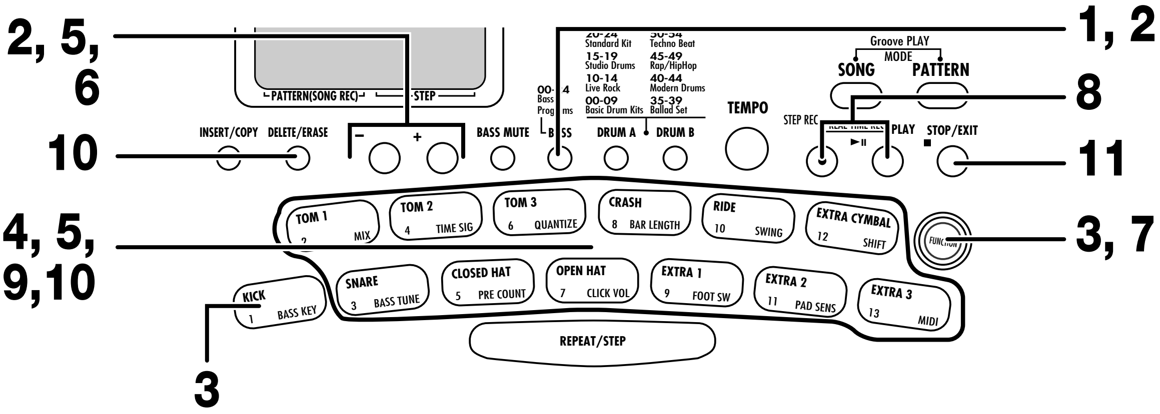


NOTE

- *If a MIDI clock signal is being received, real-time recording is not possible. For details, please refer to page 52.*
- *The sound from external MIDI components cannot be recorded.*

Real-time recording of a bass track

Next, let's add a bass track to the drum track pattern recorded in the previous section.

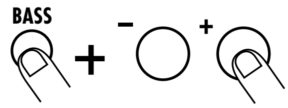


STEP 1 Press the [BASS] key and hold the key down.

The bass track is selected for recording.



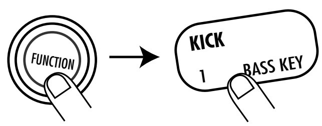
STEP 2 While holding the [BASS] key down, use the [VALUE +/-] keys to select a bass program.

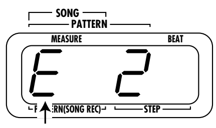


> **HINT** *The bass program can also be changed during recording.*

STEP 3 Press the [FUNCTION] key and then pad 1 (BASS KEY).

To record a bass track, you must first assign the pitches from the bass pattern to the pads. Pressing the [FUNCTION] key followed by pad 1 (BASS KEY) enables pitch setting for each pad. The [FUNCTION] key LED lights up and the display shows the pitch name assigned to pad 1.



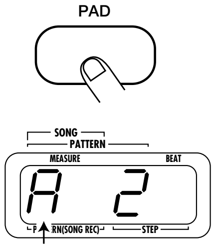


Pitch name assigned to pad 1

> **HINT** *Also if a pattern was erased, the pitches assigned to the pads in the previous pattern are retained. When wishing to use these as is, steps 3 - 7 can be omitted.*

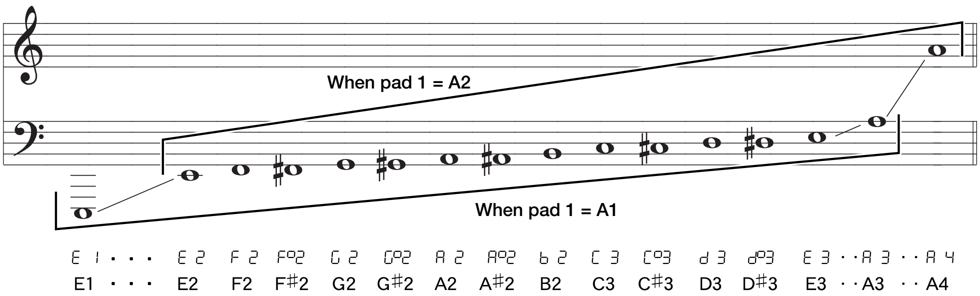
STEP 4 Among pads 2 - 13, press the one whose pitch you want to change.

While the pad is being pressed, the assigned pitch name (E1 - A4) is shown on the display.



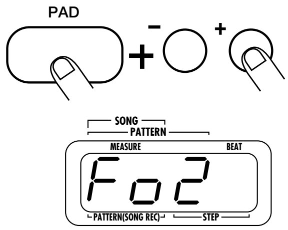
Pitch name assigned to currently pressed pad

> **NOTE** *When pad 2 - 13 is released, the pitch name assigned to pad 1 is shown again. This pitch is used as reference when shifting the entire pitch of all pads up or down in semitone steps. Take care not to inadvertently change this pitch.*

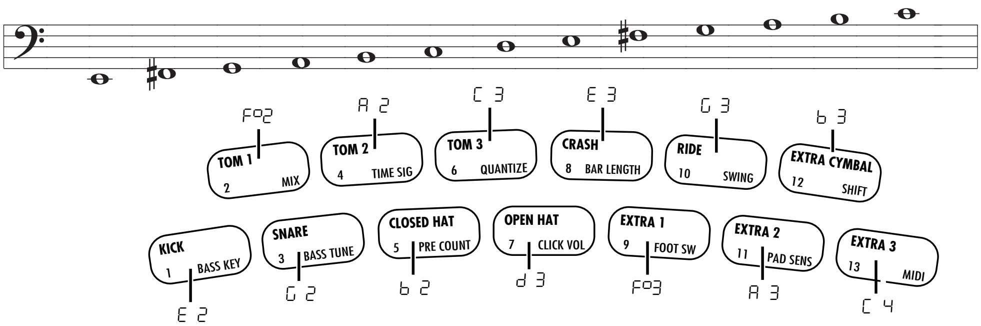


STEP 5 While holding the pad down, use the [VALUE +/-] keys to change the pitch assigned to the pad.

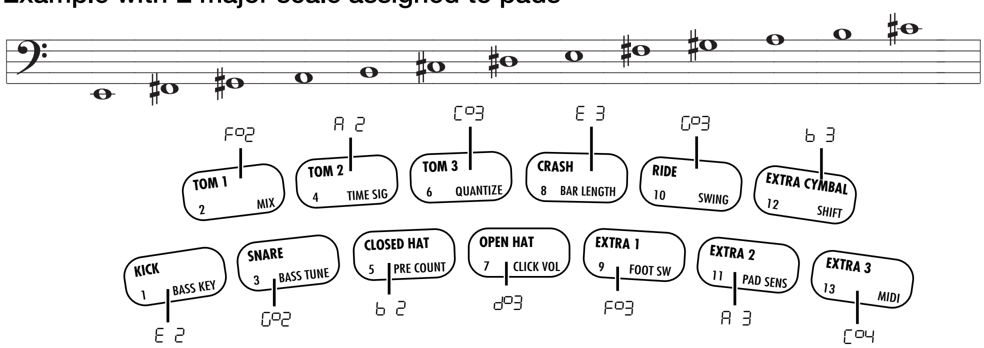
The illustration below shows an example for assigning an E minor and E major scale to the pads.
There are many possibilities for assigning pitch names. We recommend that you try out various approaches to find the one that is best suited to the bass pattern that you want to record.



Example with E minor scale assigned to pads

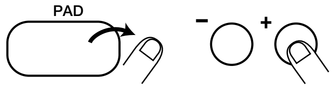


Example with E major scale assigned to pads



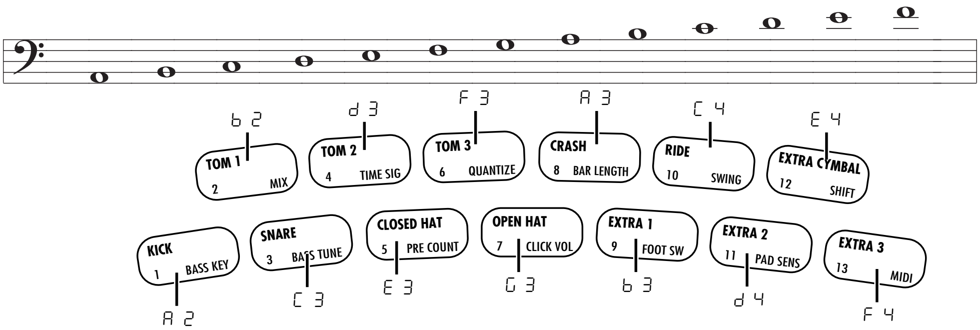
STEP 6 To shift the pitch of all pads, operate the [VALUE +/-] keys while no pad is pushed.

When the pitch assigned to pad 1 is changed, the pitch of pads 2 - 13 also changes accordingly in semitone steps. For example, if the E minor scale is assigned and you shift pad 1 from "E 2" to "A 2", the A minor scale will be assigned to the pads.



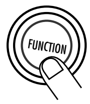
> **HINT** *Because this operation shifts the pitch of the entire bass track, it is useful for example to create a bass line that follows chord progress.*

Example with A minor scale assigned to pads



STEP 7 When the pitch has been assigned as desired, press the [FUNCTION] key once more.

The [FUNCTION] key LED goes out.



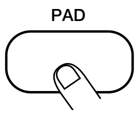
STEP 8 While holding the [REC] key down, press the [PLAY] key.

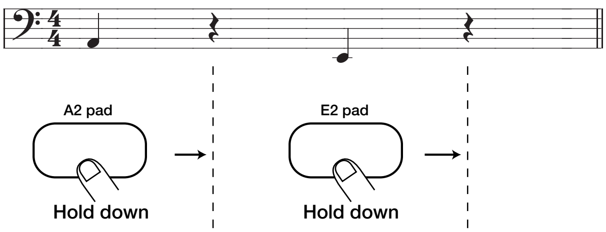
The [REC] key LED and [PLAY] key LED light up and the [TEMPO] key LED flashes. The already recorded drum tracks are played back.



STEP 9 Tap the pads in accordance with the metronome sound.

As opposed to drum track recording, the bass track records for the length of which you press a pad. For example, to record the following sequence, hold the pad to which A2 has been assigned and the pad to which E2 has been assigned down for the length of a quarter note each.

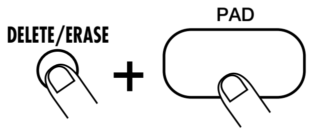


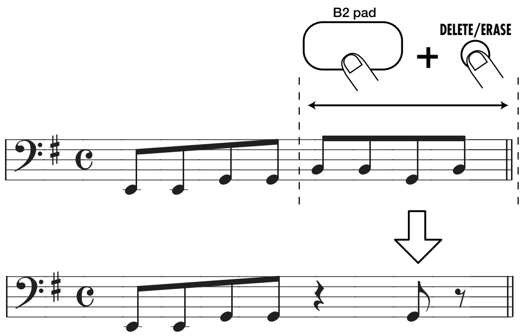


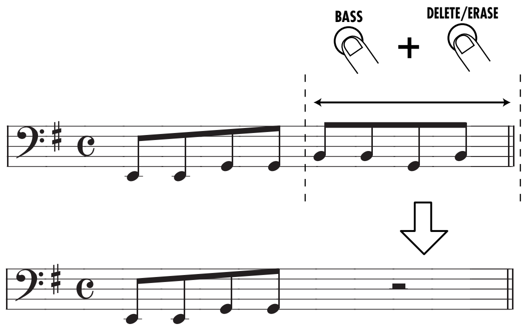
> **HINT** *When the [REC] key is pressed during real-time recording, the [REC] key LED starts to flash and pattern recording is suspended. In this condition, tapping the pads will produce sound, but it is not recorded. This is useful to check phrasing and sound before actually recording.*

STEP 10 To erase the sound from a specific pad, push the pad while holding the [DELETE/ERASE] key down.

While the key is held down, the sound from that pad is erased from the pattern. To erase the entire bass track, push the [BASS] key while holding the [DELETE/ERASE] key down. While both keys are held down, the bass track is erased.







STEP 11 When recording is completed, press the [STOP/EXIT] key.



Pattern Recording (Real-Time Recording)

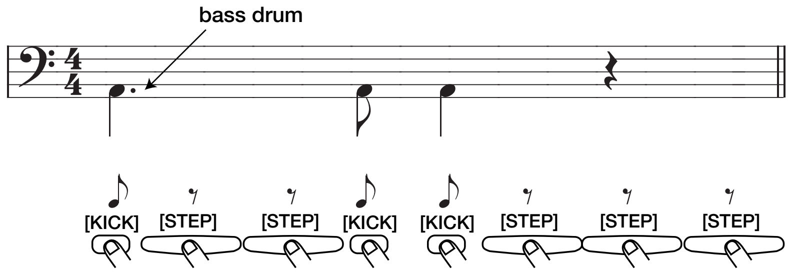
Pattern Recording (Step Recording)

This section describes step recording, which is another recording type that is possible with the RT-123.

What is step recording?

Step recording allows you to enter and record each sound separately, step by step, while the RT-123 is in the stop condition. Even without mastering how to play the pads in real time, you can easily create complex drum and bass patterns. And you don't need to stop there, because you can even create patterns that would be impossible to play in real time.

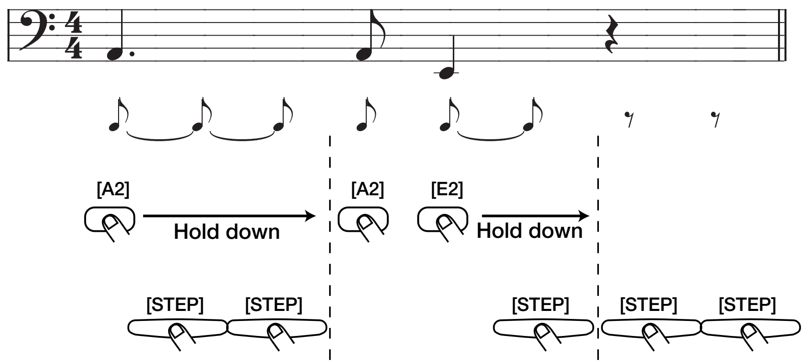
For step recording of a drum track, you select the shortest note that is to be used as unit, and you create the pattern by pressing a pad (note) or the [REPEAT/STEP] key (rest) for each step.
For example, to create the following bass drum pattern with step recording, select an eighth note as smallest unit and make the entry as follows:



When the end of a pattern is reached, it loops automatically back to the beginning, allowing you to add for example snare and hi-hat separately, to complete the pattern. By pushing 2 pads at the same time, you can enter 2 sounds in the same position.

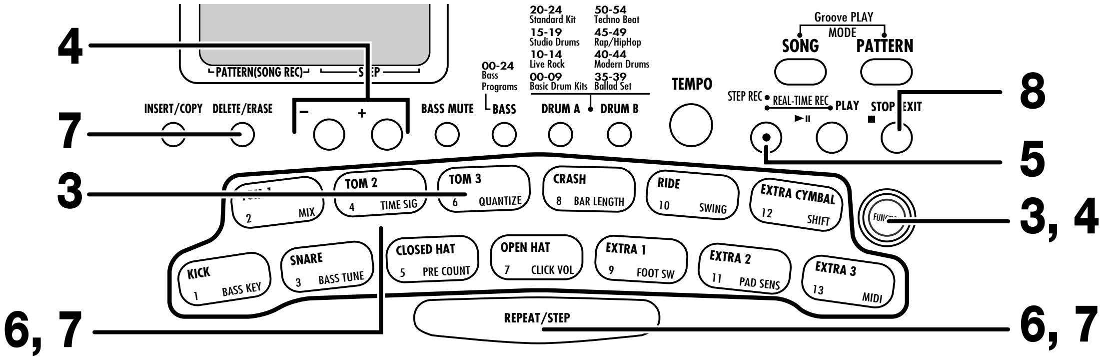
For step recording of a bass track, the procedure is slightly different, because unlike for the drum track, the pitch and duration of the sound must be specified. The fact that tapping a pad gives the shortest-unit note and pushing the [REPEAT/STEP] key gives the shortest-unit rest is the same. The pitch is determined by which pad you push. The length is determined by holding down the pad and down and pressing the [REPEAT/STEP] key multiple times. Each push of the [REPEAT/STEP] key increases the duration of the sound by the shortest unit note.

For example, to enter the following bass phrase, select an eighth note as smallest unit and make the entry as follows:



Step recording of a drum track

This section describes how to record drum tracks A/B using step recording.



STEP 1 In pattern mode, select an empty user pattern.

> **HINT** *When wishing to use a pattern where a track has already been recorded, the pattern must be erased first. Please refer to page 34.*

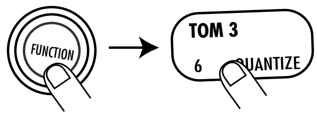
STEP 2 Select the drum track for recording.

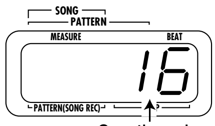
The selection method is the same as for real-time recording (→ p. 20). In this example, press the [DRUM A] key to select drum track A and select the kit as desired.

> **HINT** *Selecting drum track B allows recording in the same way.*

STEP 3 Press the [FUNCTION] key and then pad 6 (QUANTIZE).

The current quantize setting appears on the display. The minimum unit (shortest note) for step recording is determined by this setting.

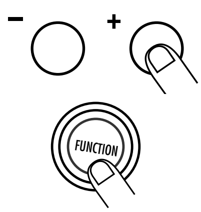




Quantize value

STEP 4 Use the [VALUE +/-] key to set the quantize value, and then press the [FUNCTION] key once more.

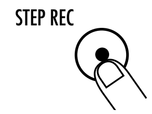
4	Quarter note	24	Sixteenth triplet note
8	Eighth note	32	Thirty-second note
12	Eighth triplet note	48	Thirty-second triplet note
16	Sixteenth note	Hi	1 tick (1/96 of quarter note)



> **HINT** *For details on the [FUNCTION] key, please refer to page 43.*

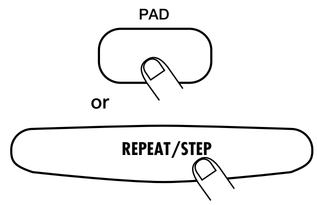
STEP 5 Press the [REC] key.

The [REC] key LED and [PLAY] key LED light up, indicating that the RT-123 is ready for recording.



STEP 6 To enter a note, press the pad corresponding to the desired sound. To enter a rest, press the [REPEAT/STEP] key.

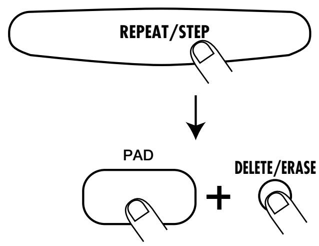
For example, tapping the [KICK] pad will enter a bass drum note (the [KICK] pad LED flashes briefly). The current position of the pattern then advances by one unit. The tapping intensity will of course also be recorded.
When the end of the pattern is reached, the recording loops back to the beginning and continues, allowing you to add to the recording as often as desired.

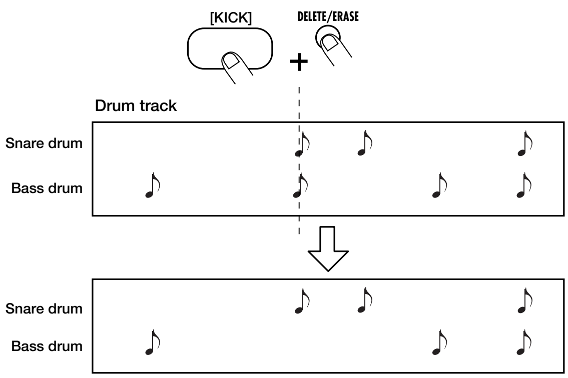


HINT *The display shows the current position in the pattern (measure/beat).*

STEP 7 To erase a sound, use the [REPEAT/STEP] key to move to the desired position. Then press the corresponding pad while holding down the [DELETE/ERASE] key.

As you move the position with the [REPEAT/STEP] key, the LED of a pad that has been input for the current position lights up. Pressing the pad while holding the [DELETE/ERASE] key down causes the LED to go out and the sound will be erased.





NOTE *During step recording, erasing the entire track is not possible.*

STEP 8 When recording is completed, press the [STOP/EXIT] key.

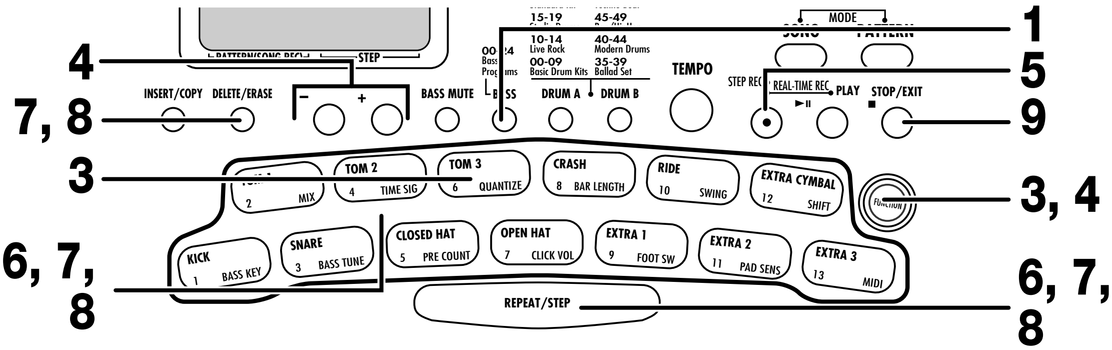
The [REC] key LED goes out, and step recording ends.

STEP 9 To record drum track B, repeat steps 3 - 8.

NOTE *If step 4 is carried out without pressing the [FUNCTION] key, the quantize value of the pattern already recorded in that track will also be changed. For example, if step recording was carried out with sixteenth notes and the quantize value was then changed to quarter notes, the pattern already recorded will also be changed to quarter notes if the [REC] key is pushed without pressing the [FUNCTION] key.*

Step recording of a bass track

Now let's add a bass track to the drum tracks recorded as described in the previous section. Because pitch and duration must be specified for the bass track, the procedure is slightly different from step recording of the drum track.



STEP 1 Press the [BASS] key.

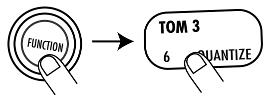
The bass track is selected.



STEP 2 If desired, select the bass program.

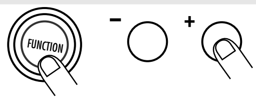
The selection method is the same as for real-time recording (→ p. 24).

STEP 3 Press the [FUNCTION] key and then pad 6 (QUANTIZE).



STEP 4 Use the [VALUE +/-] keys to set the quantize value (smallest unit for recording). Then press the [FUNCTION] key again.

For details on the quantize value, please refer to page 28.



STEP 5 Press the [REC] key.

The [REC] key LED and [PLAY] key LED light up, indicating that the RT-123 is ready for recording.



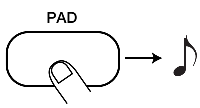
NOTE

If step 4 is carried out without pressing the [FUNCTION] key, the quantize value of the pattern already recorded in that track will also be changed. For example, if step recording of a bass track was carried out with sixteenth notes and the quantize value was then changed to quarter notes, the pattern already recorded will also be changed to quarter notes if the [REC] key is pushed without pressing the [FUNCTION] key.

STEP 6 Press the desired pad and/or the [REPEAT/STEP] key to enter the desired note or rest with the desired duration.

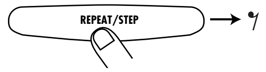
For step recording of the bass track, you perform one of three actions:

- Enter the minimum unit note: Briefly tap the pad and release it. A note of the selected minimum duration and the pitch assigned to

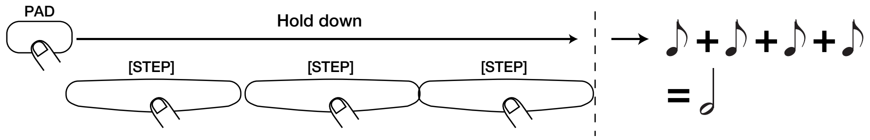


that pad is entered, and the position proceeds to the next step.

- Enter the minimum unit rest: Briefly tap the [REPEAT/STEP] key and release it. A rest of the selected minimum duration is entered, and the position proceeds to the next step.



- Enter a note longer than the minimum unit: Hold the pad down and repeatedly press the [REPEAT/STEP] key. With each push of the [REPEAT/STEP] key, the immediately preceding note is extended by one unit.

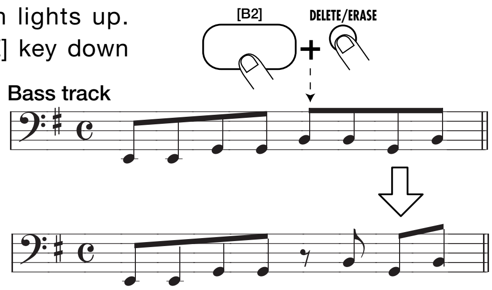


When you press a pad, its LED lights up, indicating that the note has been input. The display shows the current position in the pattern (measure/beat).

> **NOTE** *A note longer than the entire pattern cannot be input. When the input exceeds the pattern length, the note will only be as long as the pattern.*

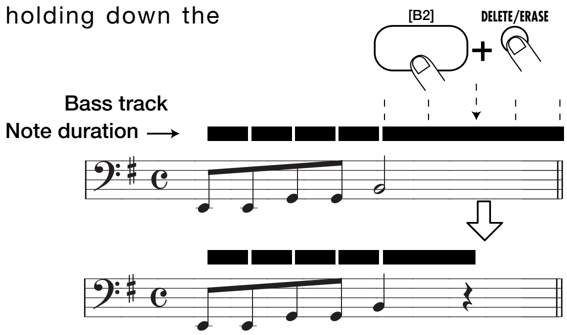
STEP 7 To erase a note, use the [REPEAT/STEP] key to move to the desired position. Then press the corresponding pad while holding down the [DELETE/ERASE] key.

As you move the position with the [REPEAT/STEP] key, the LED of a pad that has been input for the current position lights up. Pressing the pad while holding the [DELETE/ERASE] key down causes the LED to go out and the note will be erased.



STEP 8 To decrease the length of a note, use the [REPEAT/STEP] key to move to the position where the note should stop.

Then press the corresponding pad while holding down the [DELETE/ERASE] key.



> **NOTE** *During step recording, erasing the entire track is not possible.*

STEP 9 When recording is completed, press the [STOP/EXIT] key.

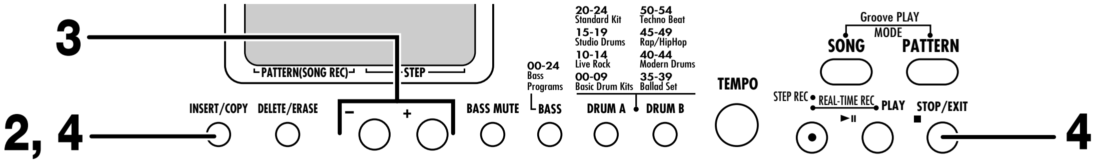
The [REC] key LED goes out, and step recording ends.

Pattern Copy/Erase

This section explains how to copy or erase a pattern.

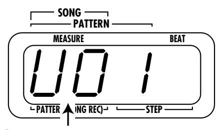
Copying a Pattern

The patterns in the RT-123 (preset patterns or user patterns) can be copied to a different user pattern number. This is useful for example when wishing to change only a part of a pattern, such as changing the bass track phrasing while keeping the drum track.



STEP 1 In pattern mode, select the pattern to be used as the copy source.

The copy source can be a user pattern or preset pattern. However, an empty user pattern (display shows "E") cannot be selected as copy source.

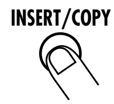


Copy source pattern number

NOTE *When the copy is executed, the existing contents of the pattern selected as copy target will be erased. Make sure that the pattern you have selected is one that you don't mind erasing.*

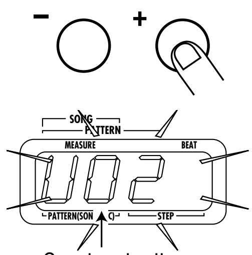
STEP 2 Press the [INSERT/COPY] key.

The [INSERT/COPY] key LED flashes and the current pattern is selected as the copy source.



STEP 3 Use the [VALUE +/-] keys to select a user pattern (U01 - U99) as copy target.

Only user patterns can be selected as copy target.



Copy target pattern number (flashing)

HINT

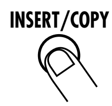
- *Keeping a [VALUE +/-] key depressed changes numbers continuously.*
- *To change numbers quickly, hold one of the [VALUE +/-] keys depressed and press the other key. The numbers will change continuously.*

NOTE

- *When the copy source is a user pattern, the same pattern will be preselected after step 2. However, it is not possible to actually copy from a pattern to the same pattern.*
- *When the copy source is a preset pattern, the same number in the user bank will be preselected after step 2.*

STEP 4 To execute the copy process, press the [INSERT/COPY] key. When wishing to cancel the process, press the [STOP/EXIT] key.

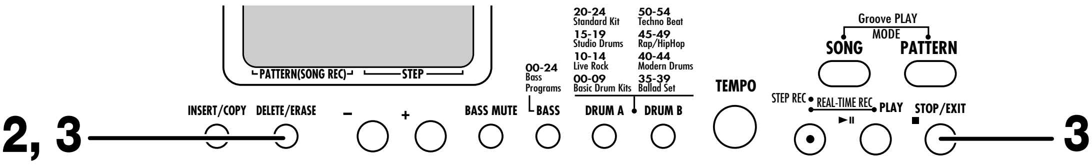
When copying is completed, the unit returns to the pattern mode with the copy target pattern being selected.
If copying was cancelled, the unit returns to the pattern mode with the copy source pattern being selected.





Erasing a Pattern

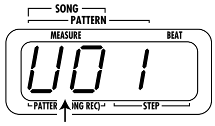
A user pattern can be erased when it is no longer needed. This serves to make way for storing new user patterns or to free up memory space.



STEP 1 In pattern mode, select the user pattern to be erased (U01 - U99).

The pattern number is shown on the display.

> **NOTE** *When a user pattern is erased, its contents cannot be restored. Make sure that you no longer need the pattern before erasing.*



Pattern number

STEP 2 Press the [DELETE/ERASE] key.

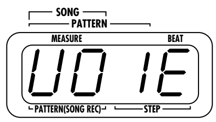
The [DELETE/ERASE] LED flashes and the indication "dEL" and the pattern number alternately are shown on the display.



STEP 3 To execute the erasing process, press the [DELETE/ERASE] key once more. When wishing to cancel the process, press the [STOP/EXIT] key.

When erasing is completed, the unit returns to the pattern mode with the empty user pattern being selected. The display will show "E". If erasing was cancelled, the unit returns to the pattern mode with the original user pattern being selected.



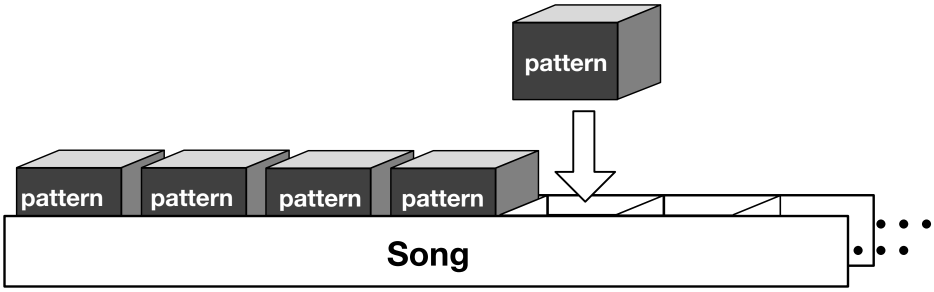


Creating Songs (Song Mode)

This section describes how to line up user patterns in a desired order to create the backing for an entire song. This mode of operation is called the song mode.

What is a song?

A song is a sequence of user patterns (preset patterns cannot be used). A song consists of multiple slots (called "steps") each of which contains one pattern. The maximum length of a song is 99 steps. The maximum number of songs that can be stored in the RT-123 is 99. (The actual number of available steps and songs will depend on the number of distinct sounds used for user patterns and other songs.) In song mode, you can change also the tempo and volume during a song.



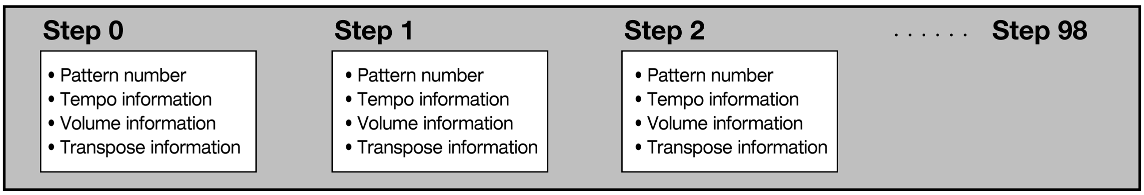
> **NOTE** *The number of steps is not equal to the number of measures. The length of each step depends on the pattern that is contained in the step.*

Besides the pattern number, each song step can contain the following settings:

- **Tempo change:** In song mode, the tempo is stored individually for each song. (The tempo is set with the [TEMPO] key, as described on page 38.) Using this tempo as reference, the tempo for each step can be varied in the range from -30 to 0 (no change) to +30 BPM (beats per minute = number of quarter notes per minute).

- **Volume:** The volume of the pattern as contained in the step can be set in the range from 0 (no change) to -30.

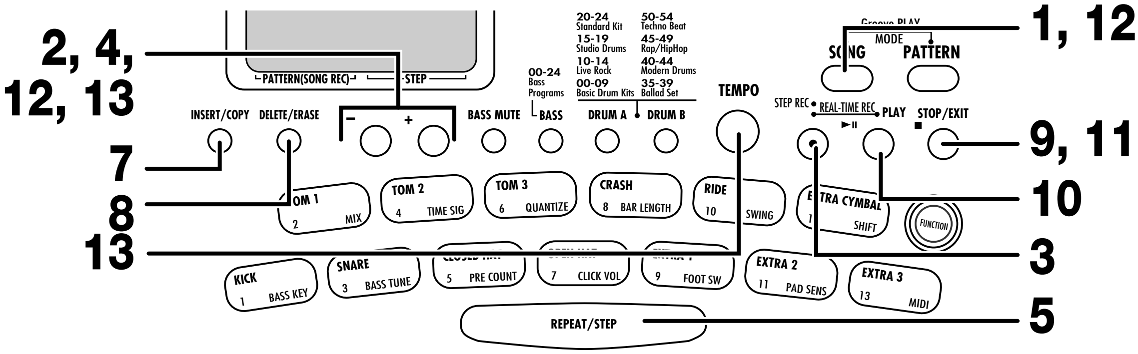
- **Transpose:** The bass track can be transposed in semitone steps in the range from -6 to 0 (no change) to +6.



Creating Songs (Song Mode)

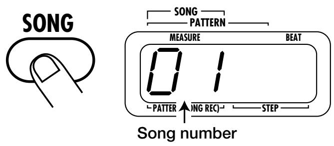
Recording and playing a song

Let's collect a number of patterns into a song.



STEP 1 Press the [SONG] key.

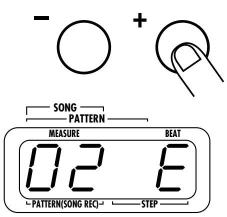
The RT-123 is switched to song mode. The display shows the currently selected song number.



STEP 2 Use the [VALUE +/-] keys to select an empty song number.

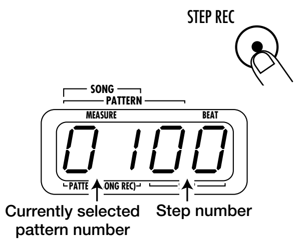
In song mode, the [VALUE +/-] keys serve to select a song. If an empty song was selected, the right side of the display shows "E".

> **HINT**
> - *Keeping a [VALUE +/-] key depressed changes numbers continuously.*
> - *To change numbers quickly, hold one of the [VALUE +/-] keys depressed and press the other key. The numbers will change continuously.*



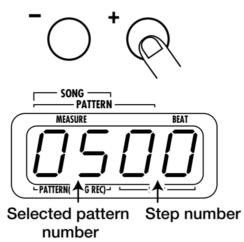
STEP 3 Press the [REC] key.

The [REC] key LED lights up, indicating that the RT-123 is ready for song recording.
The lower two digits of the display show the step number, and the upper two digits the pattern number selected for that step.



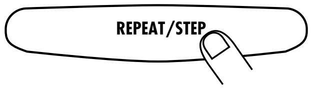
STEP 4 Use the [VALUE +/-] keys to select the user pattern number to be assigned to the first step.

During song recording, the [VALUE +/-] keys select the user pattern to be assigned to the step. (Preset patterns cannot be selected.) The selected pattern number is shown by the upper two digits of the display.

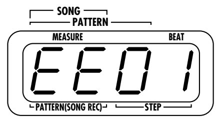


> **HINT** *When wishing to hear the currently selected pattern, you can use the [PLAY] and [STOP/EXIT] keys to play it. While a pattern is playing, you can also switch the step number back and forth to check the patterns in other steps.*

STEP 5 To proceed to the next step, press the [REPEAT/STEP] key.



The lower two digits of the display show the second step, and the upper two digits show "EE" which indicates the end of the song. In this condition, you can select the pattern for the second step. If you wish to return to the previous step, hold down the [REPEAT/STEP] key and press the [VALUE -] key.



> **HINT** *You can move back and forth in the step numbers by holding down the [SONG] key and using the [VALUE +/-] keys.*

STEP 6 Repeat steps 4 - 5 to create the entire song.

> **HINT** *One song can have up to 99 steps (00 - 98) for patterns. To change a pattern selection, hold down the [REPEAT/STEP] key and use the [VALUE -] key to return to the previous step.*

STEP 7 To insert a pattern before the currently selected step, press the [INSERT/COPY] key and perform step 4.

A new step is inserted before the currently selected step, and subsequent steps are shifted one count up.



Pattern E
Insert

Pattern A	Pattern B	Pattern C	Pattern D

⇩

Pattern A	Pattern B	Pattern E	Pattern C	Pattern D

STEP 8 To delete the currently selected step, press the [DELETE/ERASE] key.

The currently selected step is deleted, and subsequent steps are shifted one count down.



Delete

Pattern A	Pattern B	Pattern C	Pattern D

⇩

Pattern A	Pattern B	Pattern D

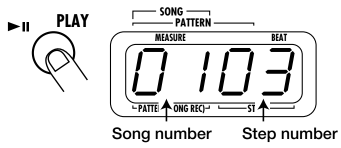
STEP 9 When one song is completed, press the [STOP/EXIT] key.

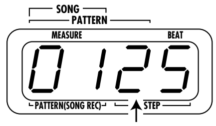
The [REC] key LED goes out, and song recording stops. The song position returns to step 1.



STEP 10 To listen to the song, press the [PLAY] key.

The [PLAY] key LED lights up and the song is played back. The [TEMPO] key LED flashes according to the tempo of the song. During playback, the upper two digits of the display show the current step number, and the lower two digits show the song number.
Pressing the [PATTERN] key during playback causes the display to show the number of measures since the start of the song.





Measure count from start of song (125 in this example)

> **HINT**
> - *By performing step 2 during playback, you can switch to the next song without stopping play.*
> - *By pressing the [BASS MUTE] key during playback, the bass track can be muted. To restore the original condition, press the key once more.*

> **NOTE**
> - *To insert a rest in a song, first create a "rest pattern" in pattern mode and then select this pattern for the desired step in song mode. Note that if an empty pattern is selected as a song step, song playback will stop at this step.*
> - *To create a rest pattern, select an empty pattern in pattern mode and press the [REC] key. The BASS KEY (bass track only), MIX, TIME SIG, BAR LENGTH, and drum kit/bass program settings active at this point will be stored.*

STEP 11 Press the [STOP/EXIT] key when wishing to terminate playback.

The LED goes out and the song returns to the start position.
By pressing the [PLAY] key again, you can start playback of the song again from the beginning.

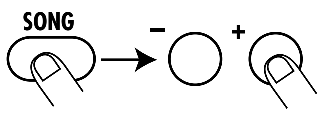


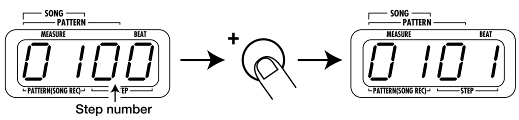
> **HINT** *Pressing the [PLAY] key instead of the [STOP/EXIT] key causes the PAUSE LED to flash, and playback is paused. To resume playback from the same point, press the [PLAY] key once more.*

> **NOTE** *Also during playback of a song, you can use the pads for manual play.*

STEP 12 To play a song from half-way, hold the [SONG] key down and use the [VALUE +/-] keys to select the step while the song is stopped.

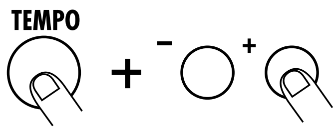
With each push of the [VALUE +] key, the step number shown on the display will advance by one increment. With each push of the [VALUE -] key, the step number shown on the display will decrease by one increment. Pressing the [PLAY] key in this condition will start playback from the selected step.





STEP 13 To change the tempo of the song, hold down the [TEMPO] key and use the [VALUE +/-] keys to adjust the tempo value (BPM).

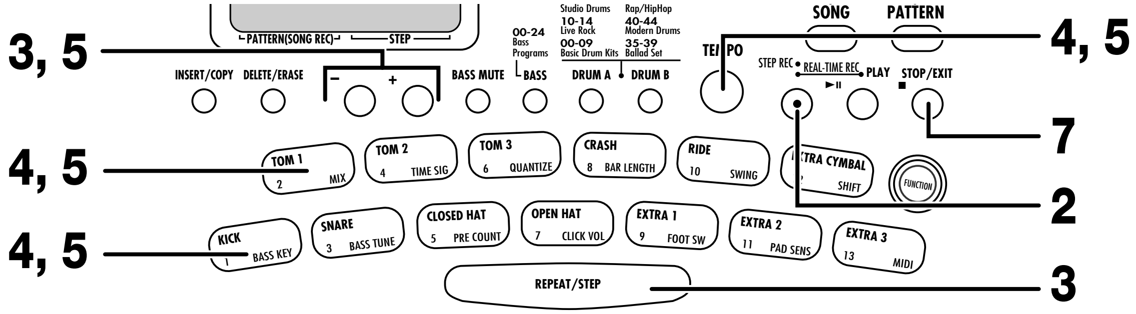
As in pattern mode, the tempo can also be specified by tapping the [TEMPO] key 2 times.



> **HINT** *The RT-123 automatically stores a so-called "master tempo" for each song. When a song is switched, the tempo last set for that song will be used.*

Editing a song

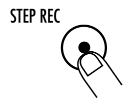
This section describes how you can alter parameters such as tempo or volume for a song that has already been recorded.



STEP 1 In song mode, select the song to which you want to make alterations.

STEP 2 Press the [REC] key.

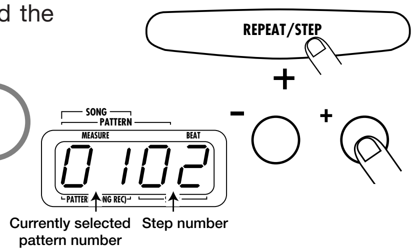
The [REC] key LED lights up, and song editing becomes possible.



STEP 3 Hold down the [REPEAT/STEP] key and use the [VALUE +/-] keys to select the step where you want to make an alteration.

The lower two digits of the display show the step number and the upper two digits show the pattern number.

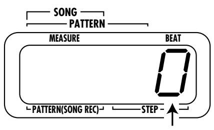
HINT *You can move back and forth in the step numbers by holding down the [SONG] key and using the [VALUE +/-] keys.*



STEP 4 Choose the type of alteration by pressing one of the following keys:

- [TEMPO] key: to change the tempo of the pattern
- Pad 2 (MIX): To set the pattern volume
- Pad 1 (BASS KEY): To transpose the bass track

The current setting of the selected parameter is shown on the display.

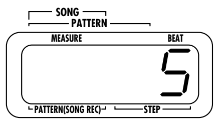


Setting of selected parameter

STEP 5 While holding down the pad whose parameter you want to change, use the [VALUE +/-] keys to set the value.

The adjustment range for the various parameters is as follows.

- Tempo change: -30 to 0 to 30 BPM
- Volume: 0 to -30
- Transpose: -6 to 0 to 6 (in semitones)

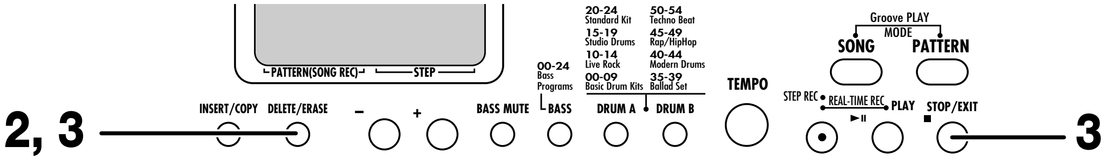


STEP 6 Repeat steps 3 - 5 until all desired parameters are set.

STEP 7 To terminate song editing, press the [STOP/EXIT] key.

Deleting a song

When you wish to delete a song, for example to make room for new recordings, proceed as follows.

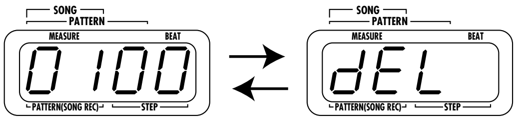


STEP 1 **In song mode, select the song you want to delete.**

STEP 2 **Press the [DELETE/ERASE] key.**

The [DELETE/ERASE] key LED flashes, and the song number and the indication "dEL" appear alternately on the display.

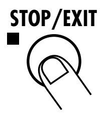




STEP 3 **To delete the song, press the [DELETE/ERASE] key. To cancel the process, press the [STOP/EXIT] key.**

When deleting is carried out, the unit returns to the song mode with an empty song selected.
When deleting is cancelled, the unit returns to the song mode with the original song selected.

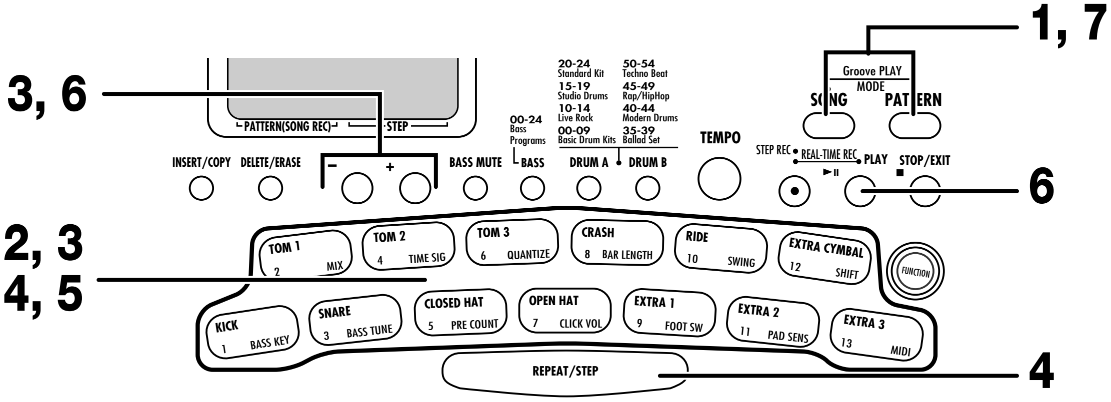




> **NOTE** *Once deleted, a song cannot be restored. Proceed with care to prevent inadvertently deleting a song.*

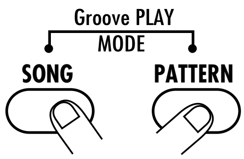
Using Pads to Play Patterns (Groove Play)

This section describes the groove play mode. In this mode, the 13 pads are used to play patterns assigned to them. This allows quick switching between patterns during a performance. Up to 4 patterns can be played simultaneously, letting you for example play two patterns with a different beat, or the same pattern twice, shifted by 1 beat, to create a complex rhythm.



STEP 1 Press the [SONG] key and the [PATTERN] together.

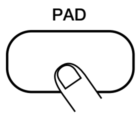
The RT-123 switches to groove play mode, and the [SONG] key LED and [PATTERN] key LED light up.
The song number is shown on the display.

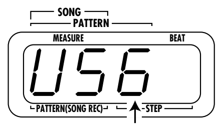


> **NOTE** *In groove play mode, all patterns are played with the master tempo of the currently selected song. If desired, use the [TEMPO] key to change the song tempo.*

STEP 2 Try out the sound by pressing any pad.

In the factory default condition, the RT-123 has 13 patterns specially designed for groove play assigned to pads 1 - 13. If a pad is held down, the assigned pattern plays repeatedly. The intensity with which the pad is hit controls the overall pattern volume. While the pad is pressed, the pattern number is shown on the display.

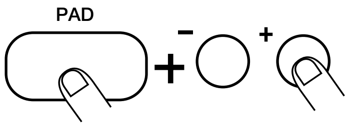




Pattern assigned to pad

STEP 3 To change the pattern assigned to a pad, hold the pad down and use the [VALUE +/-] keys to select the new pattern.

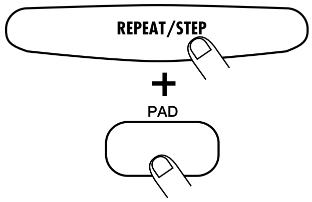
You can select either a preset pattern or a user pattern.
If the [VALUE -] key is pressed while "U01" (user pattern 01) is displayed, the display indication changes to "PAd". Instead of a pattern, a pad for which "PAd" is selected will play the single sound originally allocated to the pad (such as kick drum or snare).



> **HINT** *The patterns assigned to the pads are retained also while the unit is turned off.*

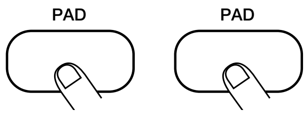
STEP 4 To repeat a pattern even when the pad is released, hit the pad while holding the [REPEAT/STEP] key down.

The pattern will then be looped even when you release the pad. To stop the loop, hit the pad once more. The unit returns to normal groove play.



STEP 5 To play several patterns simultaneously, push several pads together.

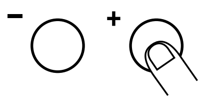
Up to 4 patterns can be played simultaneously, using the same tempo. Slightly shifting the timing when you hit the pads is also possible.

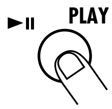


> **NOTE** *If 5 or more pads are pushed, only the patterns of the last 4 pads will be played.*

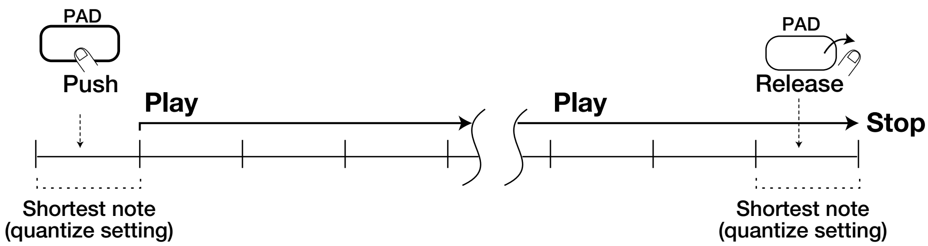
STEP 6 To play a song while groove play continues in the background, use the [VALUE +/-] keys to select the song number and press the [PLAY] key.

In groove play mode, the [PLAY] / [STOP/EXIT] keys can be used to start or stop the currently selected song. Also while a song is playing, up to four patterns assigned to pads can be played.





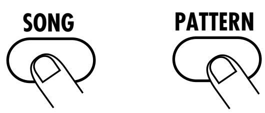
> **HINT**
> - *When the song number is changed, the groove play tempo also changes according to the master tempo of the new song. If necessary, adjust the master tempo of the song.*
> - *During groove playback, pad operation (press/release) is detected using the quantize value (shortest note) as the detection interval. This is aimed at matching the timing to other grooves and songs played at the same time. Playing with a fast timing is therefore facilitated by choosing a low quantize value. To play with small timing shifts, choose a higher quantize setting.*



> **NOTE**
> - *In groove play mode, song editing is not possible.*
> - *Muting the bass track in groove play does not affect the pattern played by the pad. It only affects the song that is being played back.*

STEP 7 When wishing to terminate the groove play mode, press the [SONG] key or [PATTERN] key.

The RT-123 returns to the song mode or pattern mode.

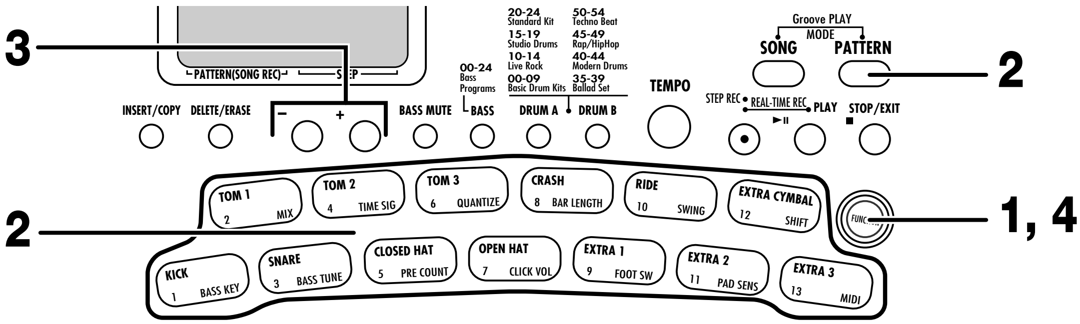


FUNCTION Key Settings

The [FUNCTION] key is used to make various settings for the RT-123. The basic steps for using the [FUNCTION] key and the setting items are described below.

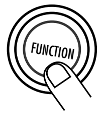
Basic [FUNCTION] key operation steps

The [FUNCTION] key is used in the same way for most setting items.



STEP 1 Press the [FUNCTION] key.

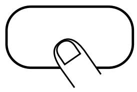
The [FUNCTION] LED flashes, indicating that you can select a setting item.

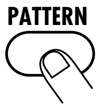


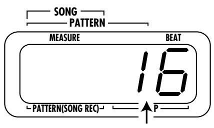
NOTE *Some items can be set only in pattern mode, while the unit is in the stop condition. For some items, the pattern must be selected before step 1.*

STEP 2 Depending on the desired item, press one of pads 1 - 13 or the [PATTERN] key.

To select items, the pads and other keys are used. The items assigned to pads 1 - 13 and the [PATTERN] Key is listed below. (The items are indicated on the pads at the bottom right.)







Setting value of item selected with pad or key

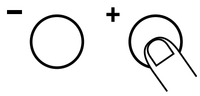
- **Pad 1 (BASS KEY):** Shifts the bass program pitch in semitones.
- **Pad 2 (MIX):** Sets the pattern/track level.
- **Pad 3 (BASS TUNE):** Allows tuning a bass program.
- **Pad 4 (TIME SIG):** Sets the beat of the pattern.
- **Pad 5 (PRE COUNT):** Switches pre-count on or off and sets the number of measures.
- **Pad 6 (QUANTIZE):** Sets the quantize value.
- **Pad 7 (CLICK VOL):** Sets the metronome volume.
- **Pad 8 (BAR LENGTH):**Sets the number of measures for the pattern.
- **Pad 9 (FOOT SW):** Selects the foot switch function.
- **Pad 10 (SWING):** Sets the amount of swing for playback.
- **Pad 11 (PAD SENS):** Adjusts the pad sensitivity.
- **Pad 12 (SHIFT):** Shifts the playback timing backwards or forwards.
- **Pad 13 (MIDI):** Sets MIDI input on/off and assigns the MIDI channel for each track.
- **[PATTERN] key:** In pattern mode, the key selects the item to be shown on the display. In song mode, the key serves to display the remaining amount of memory.

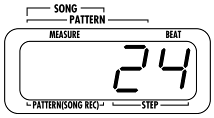
The display shows the setting of the selected item.

> **NOTE** *For some items, the sound or track that is to be set must be selected after selecting the item.*

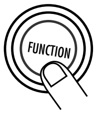
STEP 3 Change the setting with the [VALUE +/-] keys.

> **HINT**
> - *Keeping a [VALUE +/-] key depressed changes numbers continuously.*
> - *To change numbers quickly, hold one of the [VALUE +/-] keys depressed and press the other key. The numbers will change continuously.*





STEP 4 Press the [FUNCTION] key once more.



The setting changed at step 3 is now determined, and the RT-123 puts the function settings to an end.
The beat (TIME SIG) and measure (BAR LENGTH) setting can be returned to the original setting by pressing the [EXIT] key instead of the [FUNCTION] key in step 4.

The [FUNCTION] key is also used for pattern bank switching (→ p. 13), clearing all user patterns (→ p. 55), and demo play (→ p. 8, p. 55).

[FUNCTION] key items

The setting range of the various items controlled with the [FUNCTION] key is described below.

Shifting bass program pitch in semitones (BASS KEY)

Setting Range **Pad 1 pitch: A1 - A2**
Pad 2 - 13 pitch: E1 - A4

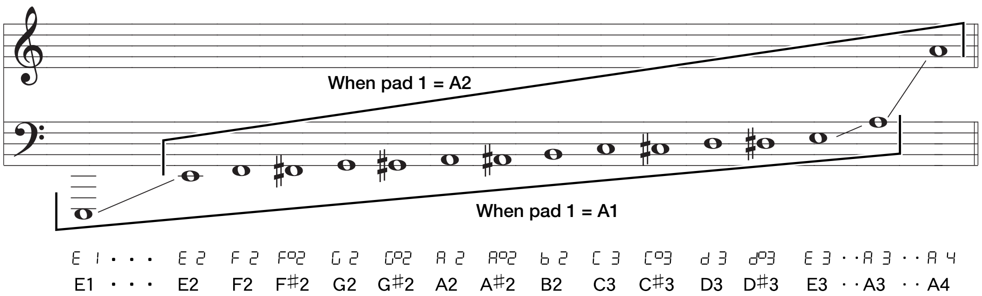
Sets the pitch of the tones assigned to the pads for a bass program in semitones. You can either shift the pitch of the entire bass program or the pitch of pads 2 - 13 individually.

■ Shifting the pitch of the entire bass program

Immediately after pressing the [FUNCTION] key and then pad 1 (BASS KEY), the pitch assigned to pad 1 (A1 - A2) is shown on the display. Use the [VALUE +/-] keys to set the pitch. This will cause the pitch of pads 2 - 13 to change accordingly.

■ Shifting the pitch of pads 2 - 13 individually

After pressing the [FUNCTION] key and then pad 1 (BASS KEY), hold down one of pads 2 - 13, and then use the [VALUE +/-] keys to set the pitch (E1 - A4) for that pad. This will not affect the pitch of other pads.



HINT *The RT-123 stores this setting for each pattern individually when the [FUNCTION] key is pressed once more to terminate the mode.*

Setting the pattern/track level (MIX)

Setting Range: 0 - 99

Sets the volume for each track in the currently selected pattern over a range of 0 - 99. After selecting this item, use the [DRUM A], [DRUM B], and [BASS] keys to select the track and then use the [VALUE +/-] keys to make the setting.

HINT *The RT-123 stores this setting for each pattern individually when the [FUNCTION] key is pressed once more to terminate the mode.*

Tuning a bass program (BASS TUNE)

Setting Range: 435 - 445 (Default value: 440)

Allows tuning the bass pitch keys in the range of A = 435 Hz to A = 445 Hz.

Setting the beat of a pattern (TIME SIG)

Setting Range: 2, 3, 4

Set the beat for the pattern to 2 (2/4 beat), 3 (3/4 beat), or 4 (4/4 beat).
Changing the beat of an already recorded pattern is also possible, but the recorded sound will change as follows. Proceed with care, especially when making the beat shorter.

■ Choosing a longer beat than the current beat
A blank space with the length of the additional beat is added to each measure.

■ Choosing a shorter beat than the current beat
The excess duration of each measure is cut off. Once the [FUNCTION] key is pressed to accept the setting, it will not be possible to restore the cut-off sections.

HINT *The RT-123 stores this setting for each pattern individually when the [FUNCTION] key is pressed once more to terminate the mode.*

Setting the pre-count (PRE COUNT)

Setting Range: 0, 1, 2, PAd (Default value: 1)

The pre-count (number of metronome ticks before the start of pattern real-time recording) can be turned on and off, and the number of measures etc. can be set. This setting applies to all patterns.

The settings have the following meaning.

0: Real-time recording starts immediately when the [PLAY] key is pressed.
1: Real-time recording starts after 1 measure has been counted.
2: Real-time recording starts after 2 measures have been counted.
PAd: The unit goes into recording standby mode when the [PLAY] key is pressed, and recording starts when any pad is pressed.

Setting the pattern resolution (QUANTIZE)

Setting Range: 4, 8, 12, 16, 24, 32, 48, Hi (Default value: 16)

Sets the quantize value (shortest note) for the pattern. The quantize setting affects the following four functions:

- **Shortest note for real-time recording**
- **Shortest note for step recording**
- **Sound interval when [REPEAT/STEP] key is used together with pad for continuous repetition**
- **Pad push/release detection timing during groove play**

The following 8 settings are available for the quantize value.

4 ....Quarter note
8 ....Eighth note
12 ....Eighth triplet note
16 ....Sixteenth note
24 ....Sixteenth triplet note
32 ....Thirty-second note
48 .....Thirty-second triplet note
Hi ....Quantize function off
During step recording: 1 tick (1/96 quarter note)

> • *Even when the quantize value is set to Hi, the [REPEAT/STEP] key interval is a thirty-second note.*
> • *The quantize value cannot be set separately for each track.*

Setting the metronome volume level (CLICK VOL)

Setting Range: 0 - 99 (Default value: 70)

The volume level of the metronome click sound heard during real-time recording can be adjusted with the [VALUE +/-] keys. This setting applies to all patterns.

Setting the number of measures for a pattern (BAR LENGTH)

Setting Range: 1 - 99

Sets the length of the pattern in the range from 1 - 99 measures. Changing the length of an already recorded pattern is also possible, but the recorded sound will change as follows. Proceed with care, especially when making the number of measures smaller.

■ Making the number of measures larger

Blank measures are added to the end of the pattern.

■ Making the number of measures smaller

The excess measures at the end of the pattern are cut off. Once the [FUNCTION] key is pressed to accept the setting, it will not be possible to restore the cut-off measures.

> HINT *The RT-123 stores this setting for each pattern individually when the [FUNCTION] key is pressed once more to terminate the mode.*

Selecting the foot switch function (FOOT SW)

This section describes how to set the function of a foot switch (FS01) connected to the [FOOT SW] jack on the rear panel. The setting is made by pressing the [FUNCTION] key followed by pad 9 (FOOT SW) and then the respective pad or key.

[Setting Range] 1 - 13, tAP, Cont, Strt, bMut, MutE, SoLo, rEP (Default value: Strt)

■ Using the FS01 to play the sound of a pad

Press the [FUNCTION] key followed by pad 9 (FOOT SW) and then one of pads 1 - 13. (The number of the pressed pad is shown on the display.) The force with which the pad is pushed is also memorized.

The FS01 will play the sound of the assigned pad when it is pushed. This is useful for example to play the bass drum with your foot.

■ Using the FS01 to change the sound of a pad

Press the [FUNCTION] key followed by pad 9 (FOOT SW). Then push the FS01 and press the first pad. Release the FS01 and press the second pad. The sound of the first pad can now be switched with the FS01. The lower two digits of the display show the number of the first pad, and the upper two digits the number of the second pad. When the foot switch is pushed, the sound of the first pad is heard. When it is released, the sound of the second pad is heard. When wishing for example to switch

FUNCTION Key Settings

between open hi-hat and closed hi-hat with your foot, push the FS01 and press pad 5 (CLOSED HAT). Then release the FS01 and press pad 7 (OPEN HAT). The sound of the first pad will be heard as soon as the FS01 is pushed, also when the pad itself is not pressed.

■ Using the FS01 to set the tempo

Press the [FUNCTION] key followed by pad 9 (FOOT SW) and then press the [TEMPO] key. (The indication "tAP" appears on the display.)

The FS01 will function in the same way as the [TEMPO] key. The tempo can be specified by pushing it two times (tap tempo function).

■ Using the FS01 to control start/pause

Press the [FUNCTION] key followed by pad 9 (FOOT SW) and then press the [PLAY] key. (The indication "Cont" appears on the display.)

The FS01 will function in the same way as the [PLAY] key. The unit switches between [Playback start] → [Pause] → [Playback start from paused position] with every push.

■ Using the FS01 to control start/stop

Press the [FUNCTION] key followed by pad 9 (FOOT SW) and then press the [STOP/EXIT] key. (The indication "Strt" appears on the display.)

The FS01 will function in the same way as the [STOP/EXIT] key. The unit switches between [Playback start] → [Stop] → [Playback start] with every push.

■ Using the FS01 to control bass muting

Press the [FUNCTION] key followed by pad 9 (FOOT SW) and then press the [BASS MUTE] key. (The indication "bMut" appears on the display.)

The FS01 will function in the same way as the [BASS MUTE] key. Pushing the switch once mutes the bass and pushing it once more turns the bass on again.

■ Using the FS01 to mute a desired track

Press the [FUNCTION] key followed by pad 9 (FOOT SW) and then press the [-] key. (The indication "MutE" appears on the display.)

When the FS01 is pushed, the currently selected track will be muted. To select the track, use the [DRUM A], [DRUM B], or [BASS] key.

■ Using the FS01 to play a desired track solo

Press the [FUNCTION] key followed by pad 9 (FOOT SW) and then press the [+] key. (The indication "SoLo" appears on the display.)

When the FS01 is pushed, all tracks except the currently selected track will be muted. To select the track, use the [DRUM A], [DRUM B], or [BASS] key.

■ Using the FS01 to control continuous percussion sound

Press the [FUNCTION] key followed by pad 9 (FOOT SW) and then press the [REPEAT/STEP] key. (The indication "rEP" appears on the display.)

When the FS01 is pushed in pattern mode while pressing a pad, the sound of that pad will be heard continuously.

Setting the playback swing amount (SWING)

Setting Range: 50 - 75 (Default value: 50)

This setting controls the swing amount (rhythm flourish). Higher values result in more pronounced swing. This item influences only the playback timing of the pattern. It does not affect the recorded data of the pattern.

Setting the pad sensitivity (PAD SENS)

Setting Range: Ehrd, HArd, norM, LItE, Loud, MEd, Soft (Default value: norM)

The [VALUE +/-] keys are used to set the pad sensitivity.

The following 7 settings are available.

- **Soft (Fixed Soft)**: Gives a soft sound regardless of the tapping intensity.
- **MEd (Fixed Medium)**: Gives a medium sound regardless of the tapping intensity.
- **Loud (Fixed Loud):** Gives a loud sound regardless of the tapping intensity.
- **LItE (Light):** This setting gives the highest sensitivity.
- **norM (Normal):** This setting gives medium sensitivity.
- **HArd (Hard):** This setting gives low sensitivity.
- **Ehrd (Extra Hard):** This setting gives the lowest sensitivity. To achieve a loud sound, the pads must be hit very hard.

Setting the playback timing shift (SHIFT)

Setting Range: -192 to +192 (Default value: 0)

Shifts the playback timing of a specific track in the currently selected pattern back or forth in 1-tick units (1/96 of a quarter note). The maximum shift is 2 measures.

■ When set to a negative value (-)

The playback timing of the selected track is shifted forward. The pattern shifted forward is deleted.

■ When set to a positive value (+)

The playback timing of the selected track is shifted backwards. The pattern shifted backwards is deleted.

Proceed with care, because once the [FUNCTION] key is used to terminate the setting, it cannot be undone.

Setting MIDI input on/off (MIDI)

Setting Range: Int, Midi (Default value: Int)

When this item is set to "Midi", the RT-123 can receive the following MIDI messages from external components.

• MIDI clock • Start • Stop • Continue • Song select

NOTE *When this item is set to "Midi", real-time recording is not possible.*

FUNCTION Key Settings

Setting the MIDI receive channel for each track (MIDI)

Setting Range: oFF, 1 – 16
(Default values, drum track A: 10, drum track B: oFF, bass track: 9)

This item sets the MIDI channel for each track. Available settings for drum tracks are oFF (not received) and 1 - 16. Available settings for the bass track are oFF (not received), 1 - 16, and Auto.
"Auto" is a special setting for playing standard GM sound source compatible MIDI files. When the RT-123 receives a GM sound source bass select message, it automatically switches the bass track to that MIDI channel.

When the [DRUM A], [DRUM B], or [BASS] key is pressed immediately after pressing the [FUNCTION] key and pad 13 (MIDI), the MIDI receive channel is shown for each track. Hold the key down and use the [VALUE +/-] keys to change the setting. This can be performed separately for each track.

Selectable settings are oFF (receive off) and 1 - 16.

Switching the information displayed in pattern mode (PATTERN) (PATTERN mode only)

[Setting Range] Auto, LoCA, Ptno (default setting: Auto)

By pressing the [FUNCTION] key and then the [PATTERN] key, you can select which information is to be shown on the display in pattern mode.

	Auto	LoCA	Ptno
Pattern stopped	Pattern number	Pattern number	Pattern number
Pattern playing	Current position (measure/beat)	Current position (measure/beat)	Pattern number
Pattern switched	New pattern number shown for 1 second	Current position (measure/beat)	Pattern number

Displaying the remaining amount of memory (PATTERN) (SONG mode only)

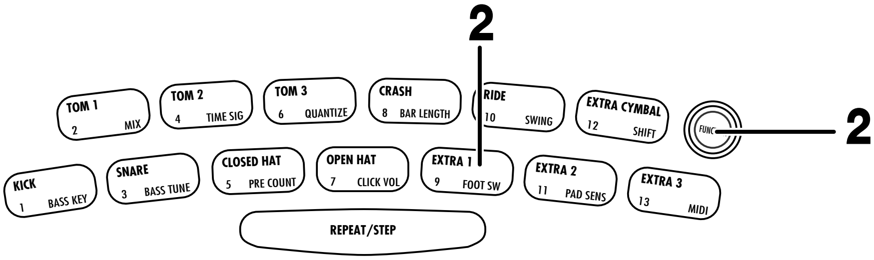
In song mode, pressing the [FUNCTION] key followed by the [PATTERN] key brings up a percentage display of the remaining amount of memory. This display is for information only, it cannot be changed. Pressing the [FUNCTION] key again returns to the song mode.

RT-123 Application Examples

This section describes examples for combining the RT-123 with optional equipment and external components.

Controlling the RT-123 with the FS01

When the separately available foot switch (FS01) is connected to the [FOOT SW] jack on the rear panel, it can be used to operate for example the bass drum or switch between open and closed hi-hat sound. The switch can also be used to start and stop playback of the RT-123 with your foot.

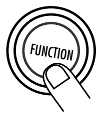


STEP 1 Connect the FS01 to the [FOOT SW] jack on the rear panel.

For information on connections, see page 7.

STEP 2 Use the [FUNCTION] key and pad 9 (FOOT SW) to set the FS01 function.

For information on the setting procedure, see page 47.



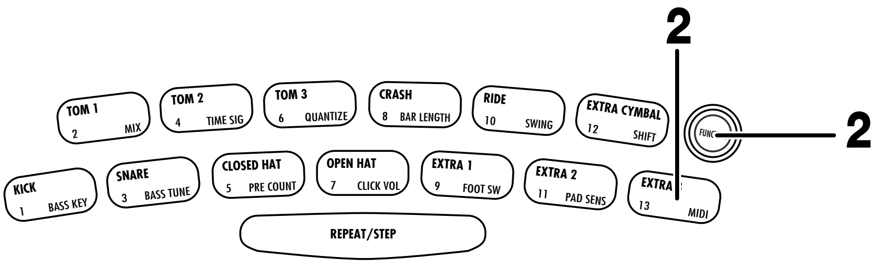


STEP 3 Use the FS01 in pattern mode or play mode.

Depending on the function selected in step 2, the FS01 activates the sound of a specific pad, switches between the sound of two pads, or controls playback start/stop of a song or pattern. For details, see page 47 - 48.

Synchronized MIDI operation

Operation of the RT-123 can be synchronized with a sequencer or other rhythm machine equipped with a MIDI jack. This allows playback of the patterns or songs of the RT-123 with the tempo determined by the sequencer.



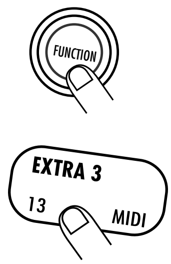
STEP 1 Connect the MIDI OUT jack of the MIDI sequencer, rhythm machine, or other MIDI component to the [MIDI IN] connector of the RT-123, using a MIDI cable.

For information on connections, see page 3.

NOTE *Verify that the external MIDI sequencer can send the MIDI clock, start, stop, and continue signals.*

STEP 2 Use the [FUNCTION] key and pad 13 (MIDI) and set up the RT-123 so that it can receive the MIDI clock and other messages.

For information on the setting procedure, see page 49.

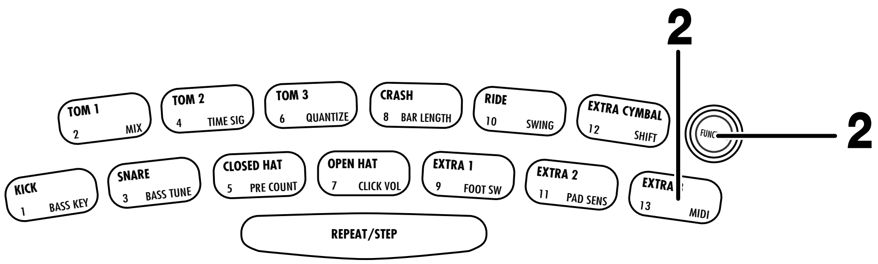


STEP 3 Start the external MIDI sequencer.

The RT-123 operates under control of the MIDI sequencer.

Using MIDI equipment to play the RT-123

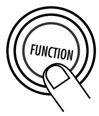
Using a MIDI sequencer, MIDI keyboard, or similar MIDI Device you can play the built-in sound sources of the RT-123.

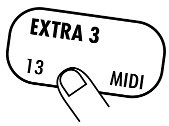


STEP 1 **Connect the MIDI OUT jack of the MIDI sequencer or other MIDI component to the [MIDI IN] connector of the RT-123, using a MIDI cable.**

STEP 2 **Use the [FUNCTION] key and pad 13 (MIDI) to assign the tracks of the RT-123 to receive MIDI channels which are matched to the send channels of the external MIDI component.**

For information on the MIDI channel setting procedure, see page 49.





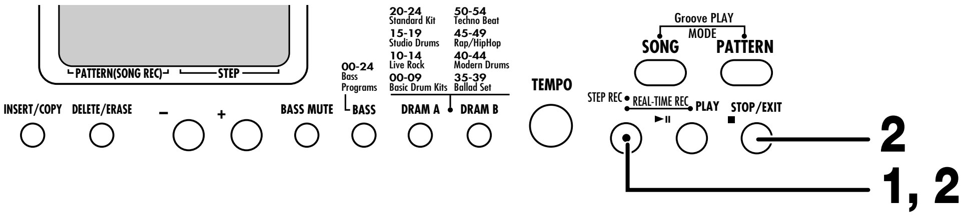
STEP 3 **Play the MIDI sequencer or keyboard.**

The RT-123 produces sound according to the note numbers received via the [MIDI IN] connector. Program change messages can be used to switch drum kits and bass programs of the RT-123. For information on program change numbers and corresponding drum kits and bass programs, please refer to the "Reference" section at the end of this manual.

RT-123 Application Examples

Returning the RT-123 to the factory default condition (initialization)

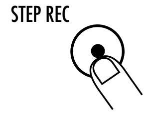
You can reset the RT-123 to the factory default condition. Use this function with care, because it will erase all patterns and songs that have been recorded by the user.

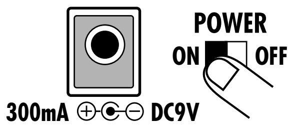


NOTE *After initialization, all user patterns U01 - U99 will be blank.*

STEP 1 Turn power to the RT-123 on while holding the [REC] key down.

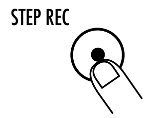
The indication "Init" flashes on the display.





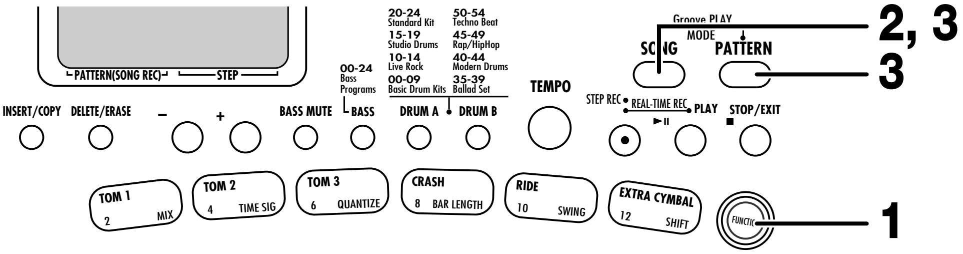
STEP 2 When wishing to go ahead with the initialization, press the [REC] key once more. To cancel the procedure, press the [STOP/EXIT] key.

When initialization is carried out, all settings and data of the RT-123 are reset to the factory default condition, and then the unit starts up. If the process was canceled, the unit starts up normally.



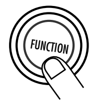


Listening to the demo



STEP 1 Press the [FUNCTION] key.

The [FUNCTION] key LED flashes.



STEP 2 Press the [SONG] key.

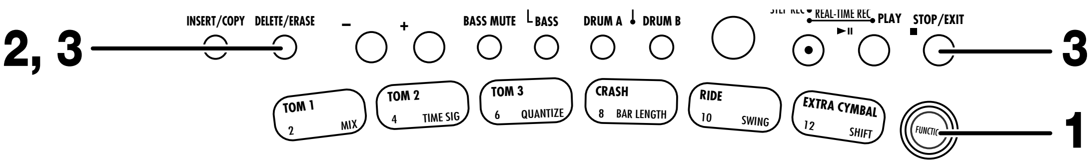
Playback of the demo song starts. The demo continues to play until it is stopped by the user.



STEP 3 To stop the demo, press the [SONG] key or [PATTERN] key.

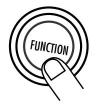
The RT-123 goes into song mode if the [SONG] key is pressed, and into pattern mode if the [PATTERN] key is pressed.

Clearing all user patterns



STEP 1 Press the [FUNCTION] key.

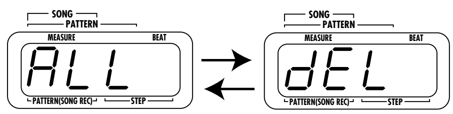
The [FUNCTION] key LED flashes.



STEP 2 Press the [DELETE/ERASE] key.

The indications "dEL" and "ALL" appear alternately on the display.





STEP 3 To carry out the operation, press the [DELETE/ERASE] key once more. To cancel the operation, press the [STOP/EXIT] key.

When the [DELETE/ERASE] key is pressed, all user patterns U01 - U99 will become blank

Troubleshooting

Check the following items first if there seems to be a problem with the RT-123.

Symptom	Check	Remedy
No sound or very low volume.	Is supplied AC adapter connected properly?	Connect AC adapter as described in "Getting Connected" (page 7). Use only the supplied AC adapter.
	Is [OUTPUT] jack connected correctly to the playback system?	Make connections as described in "Getting Connected" (page 7).
	Is there a problem with the shielded cable?	Try using another cable.
	Is the connected playback system operating normally?	Check the system and make sure that the volume level is adjusted properly.
	Is volume of RT-123 set correctly?	Set [VOLUME] control to a suitable position.
Sound is distorted or intermittent.	Is output level of RT-123 set too high?	Set [VOLUME] control of RT-123 to a suitable position.
Song cannot be recorded.	Is RT-123 set to mode other than song mode?	Activate song mode (page 34).
	Is memory capacity limit reached?	Delete unneeded patterns and songs.
FS01 has no effect.	Is FS01 connected correctly to [FOOT SW] jack?	Make connections as described in "Getting Connected" (page 7).
	Is desired function of FS01 activated?	Use [FUNCTION] key and pad 9 (FOOT SW) to select function (→ p. 47).
Simultaneous playback with MIDI components is not possible.	Is the MIDI receive function set to ON?	Use the [FUNCTION] key and pad 13 (MIDI) to change the setting from "Int" (MIDI clock receive disabled) to "Midi" (MIDI clock receive enabled).

SPECIFICATIONS

• **Drum Kits:**	80 (Including Percussion, SFX kit)
• **Bass Programs:**	25
• **Rhythm Patterns:**	Preset; 297/User; 99
• **Songs:**	99
• **Maximum Notes:**	10,000 notes
• **Maximum Polyphony:**	30 voices
• **Resolution:**	96 PPQN
• **Tempo:**	40 to 250 BPM
• **Pads:**	13 with Velocity Sensitivity
• **Control:**	MIDI in, Control in for FS01
• **Display:**	4-digit, 7-segment LED
• **Input:**	Line; 1/4" jack (Mono)X 1, Impedance 33kΩ
• **Outputs:**	Line (L/Mono, R); 1/4" jack (Mono)X 2, Impedance 2.2kΩ or less Phones; 1/4" jack (Stereo)X 1, Output Power 50mW into 32Ω
• **Power Requirements:**	9V DC/300mA (from supplied AC adaptor AD-0006)
• **Dimensions:**	196(W) X 158(D) X 35(H)mm
• **Weight:**	550g
• **Accessory:**	Footswitch FS01

* All specifications and appearance subject to change without notice.

MIDI ProgramChange# to DRUM/percussion/SFX KIT Assign

PC	KIT	
0	9	General Drum
1	55	General Drum 1
2	0	Live Rock
3	1	Studio
4	2	Standard
5	3	Funk Trap
6	4	Epic Rock
7	5	Ballad
8	57	General Drum 3
9	6	Modern
10	7	Rap/HipHop
11	8	Techno Beat
12	9	General Drum
13	10	Live Rock 1
14	11	Live Rock 2
15	12	Live Rock 3
16	58	General Drum 4
17	13	Live Rock 4
18	14	Live Rock 5
19	15	Studio 1
20	16	Studio 2
21	17	Studio 3
22	18	Studio 4
23	19	Studio 5
24	59	General Drum 5
25	61	General Drum 7
26	62	General Drum 8
27	20	Standard 1
28	21	Standard 2
29	22	Standard 3
30	23	Standard 4
31	24	Standard 5
32	9	General Drum
33	25	Funk Trap 1
34	26	Funk Trap 2
35	27	Funk Trap 3
36	28	Funk Trap 4
37	29	Funk Trap 5
38	30	Epic Rock 1
39	31	Epic Rock 2
40	63	General Drum 9
41	32	Epic Rock 3
42	33	Epic Rock 4
43	34	Epic Rock 5
44	35	Ballad 1
45	36	Ballad 2
46	37	Ballad 3
47	38	Ballad 4
48	39	Ballad 5
49	40	Modern 1
50	78	Kick and Snare 1
51	41	Modern 2
52	42	Modern 3
53	43	Modern 4
54	44	Modern 5
55	45	Rap/HipHop 1
56	64	Effected Drum
57	64	Effected Drum
58	46	Rap/HipHop 2
59	47	Rap/HipHop 3
60	48	Rap/HipHop 4
61	49	Rap/HipHop 5
62	50	Techno Beat 1
63	51	Techno Beat 2
64	52	Techno Beat 3
65	53	Techno Beat 4
66	54	Techno Beat 5
67	55	General Drum 1
68	56	General Drum 2
69	57	General Drum 3
70	58	General Drum 4
71	59	General Drum 5
72	60	General Drum 6
73	61	General Drum 7
74	62	General Drum 8
75	63	General Drum 9
76	64	Effected Drum
77	65	Drum Skins
78	66	Lo Percussion
79	67	Hi Percussion
80	68	Clicks and Sticks
81	69	Single Percussion
82	70	Agogo Gamelan
83	71	Percussion/SFX
84	72	Various Percussion 1
85	73	Various Percussion 2
86	74	Various Percussion 3
87	75	Various Percussion 4
88	76	Various Percussion 5
89	77	Cymbal Set
90	78	Kick and Snare 1
91	79	Kick and Snare 2
92	0	Live Rock
93	1	Studio
94	2	Standard
95	3	Funk Trap
96	4	Epic Rock
97	5	Ballad
98	6	Modern
99	7	Rap/HipHop
100	8	Techno Beat
101	9	General Drum
102	10	Live Rock 1
103	11	Live Rock 2
104	12	Live Rock 3
105	13	Live Rock 4
106	14	Live Rock 5
107	15	Studio 1
108	16	Studio 2
109	17	Studio 3
110	18	Studio 4
111	19	Studio 5
112	20	Standard 1
113	21	Standard 2
114	22	Standard 3
115	23	Standard 4
116	24	Standard 5
117	25	Funk Trap 1
118	26	Funk Trap 2
119	27	Funk Trap 3
120	28	Funk Trap 4
121	29	Funk Trap 5
122	30	Epic Rock 1
123	31	Epic Rock 2
124	32	Epic Rock 3
125	33	Epic Rock 4
126	34	Epic Rock 5
127	9	General Drum

MIDI ProgramChange# to BASS PROGRAM Assign

PC	KIT	
0	0	Live Bass
1	1	Studio Bass
2	2	Epic Bass
3	3	Funk Bass
4	4	Ballad Bass
5	5	Acoustic Bass
6	6	Modern Bass
7	7	Synth Bass
8	8	Techno Bass
9	9	Big Bottom Bass
10	10	SubSlap Bass
11	11	Digital Acoustic
12	12	Bass Harmonics
13	13	No Frets
14	14	Acoustic Jazz
15	15	Digital Pick
16	16	Techno Analog
17	17	Analog Touch
18	18	Lo Sine
19	19	Harmonics Bass
20	20	Saw Wave
21	21	Square Wave
22	22	Hi Sine
23	23	Drive Bass
24	24	Fuzz Bass
25	0	Live Bass
26	1	Studio Bass
27	2	Epic Bass
28	3	Funk Bass
29	4	Ballad Bass
30	5	Acoustic Bass
31	6	Modern Bass
32	5	Acoustic Bass
33	14	Acoustic Jazz
34	1	Studio Bass
35	13	No Frets
36	3	Funk Bass
37	10	SubSlap Bass
38	7	Synth Bass
39	8	Techno Bass
40	7	Synth Bass
41	8	Techno Bass
42	9	Big Bottom Bass
43	10	SubSlap Bass
44	11	Digital Acoustic
45	12	Bass Harmonics
46	13	No Frets
47	14	Acoustic Jazz
48	15	Digital Pick
49	16	Techno Analog
50	17	Analog Touch
51	18	Lo Sine
52	19	Harmonics Bass
53	20	Saw Wave
54	21	Square Wave
55	22	Hi Sine
56	23	Drive Bass
57	24	Fuzz Bass
58	0	Live Bass
59	1	Studio Bass
60	2	Epic Bass
61	3	Funk Bass
62	4	Ballad Bass
63	5	Acoustic Bass
64	6	Modern Bass
65	7	Synth Bass
66	8	Techno Bass
67	9	Big Bottom Bass
68	10	SubSlap Bass
69	11	Digital Acoustic
70	12	Bass Harmonics
71	13	No Frets
72	14	Acoustic Jazz
73	15	Digital Pick
74	16	Techno Analog
75	17	Analog Touch
76	18	Lo Sine
77	19	Harmonics Bass
78	20	Saw Wave
79	21	Square Wave
80	22	Hi Sine
81	23	Drive Bass
82	24	Fuzz Bass
83	0	Live Bass
84	1	Studio Bass
85	2	Epic Bass
86	3	Funk Bass
87	4	Ballad Bass
88	5	Acoustic Bass
89	6	Modern Bass
90	7	Synth Bass
91	8	Techno Bass
92	9	Big Bottom Bass
93	10	SubSlap Bass
94	11	Digital Acoustic
95	12	Bass Harmonics
96	13	No Frets
97	14	Acoustic Jazz
98	15	Digital Pick
99	16	Techno Analog
100	17	Analog Touch
101	18	Lo Sine
102	19	Harmonics Bass
103	20	Saw Wave
104	21	Square Wave
105	22	Hi Sine
106	23	Drive Bass
107	24	Fuzz Bass
108	0	Live Bass
109	1	Studio Bass
110	2	Epic Bass
111	3	Funk Bass
112	4	Ballad Bass
113	5	Acoustic Bass
114	6	Modern Bass
115	7	Synth Bass
116	8	Techno Bass
117	9	Big Bottom Bass
118	10	SubSlap Bass
119	11	Digital Acoustic
120	12	Bass Harmonics
121	13	No Frets
122	14	Acoustic Jazz
123	15	Digital Pick
124	16	Techno Analog
125	17	Analog Touch
126	18	Lo Sine
127	19	Harmonics Bass

DRUM KITs

0	Live Rock
1	Studio
2	Standard
3	Funk Trap
4	Epic Rock
5	Ballad
6	Modern
7	Rap/HipHop
8	Techno Beat
9	General Drum
10	Live Rock 1
11	Live Rock 2
12	Live Rock 3
13	Live Rock 4
14	Live Rock 5
15	Studio 1
16	Studio 2
17	Studio 3
18	Studio 4
19	Studio 5
20	Standard 1
21	Standard 2
22	Standard 3
23	Standard 4
24	Standard 5
25	Funk Trap 1
26	Funk Trap 2
27	Funk Trap 3
28	Funk Trap 4
29	Funk Trap 5
30	Epic Rock 1
31	Epic Rock 2
32	Epic Rock 3
33	Epic Rock 4
34	Epic Rock 5
35	Ballad 1
36	Ballad 2
37	Ballad 3
38	Ballad 4
39	Ballad 5

40	Modern 1
41	Modern 2
42	Modern 3
43	Modern 4
44	Modern 5
45	Rap/HipHop 1
46	Rap/HipHop 2
47	Rap/HipHop 3
48	Rap/HipHop 4
49	Rap/HipHop 5
50	Techno Beat 1
51	Techno Beat 2
52	Techno Beat 3
53	Techno Beat 4
54	Techno Beat 5
55	General Drum 1
56	General Drum 2
57	General Drum 3
58	General Drum 4
59	General Drum 5
60	General Drum 6
61	General Drum 7
62	General Drum 8
63	General Drum 9
64	Effected Drum
65	Drum Skins
66	Lo Percussion
67	Hi Percussion
68	Clicks and Sticks
69	Single Percussion
70	Agogo Gamelan
71	Percussion/SFX
72	Various Percussion 1
73	Various Percussion 2
74	Various Percussion 3
75	Various Percussion 4
76	Various Percussion 5
77	Cymbal Set
78	Kick and Snare 1
79	Kick and Snare 2

BASS Programs

0	Live Bass
1	Studio Bass
2	Epic Bass
3	Funk Bass
4	Ballad Bass
5	Acoustic Bass
6	Modern Bass
7	Synth Bass
8	Techno Bass
9	Big Bottom Bass
10	SubSlap Bass
11	Digital Acoustic
12	Bass Harmonics
13	No Frets
14	Acoustic Jazz
15	Digital Pick
16	Techno Analog
17	Analog Touch
18	Lo Sine
19	Harmonics Bass
20	Saw Wave
21	Square Wave
22	Hi Sine
23	Drive Bass
24	Fuzz Bass

PRESET PATTERN LIST

No	Name	BPM	DrumA		DrumB		Bass	
A01	Rock01	130	0	Live Rock	------	------------------	0	Live Bass
A02	Rock02	136	0	Live Rock	10	Live Rock 1	3	Funk Bass
A03	Rock03	136	27	Funk Trap 3	79	Kick and Snare 2	23	Drive Bass
A04	Rock04	136	25	Funk Trap 1	------	------------------	1	Studio Bass
A05	Rock05	112	25	Funk Trap 1	25	Funk Trap 1	4	Ballad Bass
A06	Rock06	140	16	Studio 2	------	------------------	4	Ballad Bass
A07	Rock07	120	0	Live Rock	------	------------------	15	Digital Pick
A08	Rock08	120	0	Live Rock	25	Funk Trap 1	3	Funk Bass
A09	Rock09	120	22	Standard 3	67	Hi Percussion	4	Ballad Bass
A10	Rock10	92	0	Live Rock	25	Funk Trap 1	0	Live Bass
A11	Rock11	116	0	Live Rock	25	Funk Trap 1	0	Live Bass
A12	Rock12	96	23	Standard 4	11	Live Rock 2	4	Ballad Bass
A13	Rock13	96	0	Live Rock	------	------------------	4	Ballad Bass
A14	Rock14	111	23	Standard 4	------	------------------	4	Ballad Bass
A15	Rock15	103	0	Live Rock	------	------------------	0	Live Bass
A16	Rock16	120	41	Modern 2	21	Standard 2	5	Acoustic Bass
A17	Rock17	120	6	Modern	------	------------------	2	Epic Bass
A18	Rock18	99	3	Funk Trap	74	Various Percussion 3	5	Acoustic Bass
A19	Rock19	132	16	Studio 2	8	Techno Beat	23	Drive Bass
A20	Rock20	130	31	Epic Rock 2	2	Standard	4	Ballad Bass
A21	Rock21	96	43	Modern 4	9	General Drum	4	Ballad Bass
A22	Rock22	160	21	Standard 2	25	Funk Trap 1	1	Studio Bass
A23	Rock23	160	25	Funk Trap 1	25	Funk Trap 1	1	Studio Bass
A24	Rock24	120	23	Standard 4	25	Funk Trap 1	1	Studio Bass
A25	Rock25	100	13	Live Rock 4	74	Various Percussion 3	4	Ballad Bass
A26	Rock26	180	6	Modern	74	Various Percussion 3	13	No Frets
A27	Rock27	104	75	Various Percussion 4	20	Standard 1	4	Ballad Bass
A28	HardRock01	103	6	Modern	------	------------------	14	Acoustic Jazz
A29	HardRock02	121	0	Live Rock	------	------------------	4	Ballad Bass
A30	HardRock03	99	0	Live Rock	------	------------------	3	Funk Bass
A31	HardRock04	115	0	Live Rock	67	Hi Percussion	4	Ballad Bass
A32	HardRock05	121	0	Live Rock	------	------------------	0	Live Bass
A33	HardRock06	136	0	Live Rock	67	Hi Percussion	0	Live Bass
A34	HardRock07	120	0	Live Rock	76	Various Percussion 5	0	Live Bass
A35	HardRock08	79	0	Live Rock	66	Lo Percussion	11	Digital Acoustic
A36	Metal01	98	0	Live Rock	30	Epic Rock 1	0	Live Bass
A37	Metal02	100	3	Funk Trap	6	Modern	2	Epic Bass
A38	Metal03	100	31	Epic Rock 2	38	Ballad 4	0	Live Bass
A39	Metal04	103	32	Epic Rock 3	32	Epic Rock 3	23	Drive Bass
A40	Metal05	112	1	Studio	79	Kick and Snare 2	0	Live Bass
A41	Metal06	150	0	Live Rock	------	------------------	0	Live Bass
A42	Thrash01	166	30	Epic Rock 1	34	Epic Rock 5	4	Ballad Bass
A43	Thrash02	186	0	Live Rock	------	------------------	24	Fuzz Bass
A44	Thrash03	136	34	Epic Rock 5	30	Epic Rock 1	24	Fuzz Bass
A45	Thrash04	148	32	Epic Rock 3	34	Epic Rock 5	9	Big Bottom Bass
A46	Punk01	120	30	Epic Rock 1	------	------------------	0	Live Bass
A47	Punk02	160	14	Live Rock 5	------	------------------	0	Live Bass
A48	Punk03	158	25	Funk Trap 1	4	Epic Rock	24	Fuzz Bass
A49	Punk04	160	26	Funk Trap 2	1	Studio	4	Ballad Bass
A50	Fusion01	105	41	Modern 2	21	Standard 2	15	Digital Pick
A51	Fusion02	113	1	Studio	74	Various Percussion 3	5	Acoustic Bass
A52	Fusion03	120	20	Standard 1	74	Various Percussion 3	15	Digital Pick
A53	Fusion04	94	18	Studio 4	64	Effected Drum	1	Studio Bass
A54	Industry01	111	64	Effected Drum	76	Various Percussion 5	11	Digital Acoustic
A55	Industry02	129	32	Epic Rock 3	8	Techno Beat	11	Digital Acoustic
A56	Industry03	137	32	Epic Rock 3	8	Techno Beat	15	Digital Pick
A57	Industry04	120	32	Epic Rock 3	71	Percussion/SFX	9	Big Bottom Bass
A58	Pop01	100	18	Studio 4	------	------------------	4	Ballad Bass

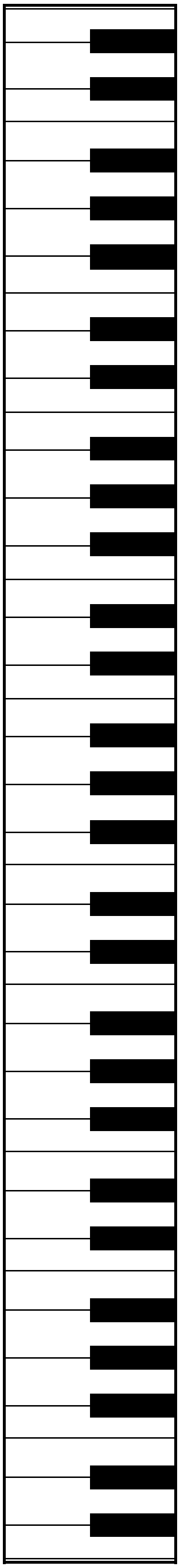
A59	Pop02	124	3	Funk Trap	65	Drum Skins	4	Ballad Bass
A60	Pop03	132	17	Studio 3	------	------------------	0	Live Bass
A61	Pop04	112	2	Standard	67	Hi Percussion	0	Live Bass
A62	Pop05	104	25	Funk Trap 1	------	------------------	3	Funk Bass
A63	Pop06	80	67	Hi Percussion	2	Standard	5	Acoustic Bass
A64	Pop07	117	47	Rap/HipHop 3	67	Hi Percussion	4	Ballad Bass
A65	Pop08	106	22	Standard 3	41	Modern 2	------	---------------
A66	Pop09	100	26	Funk Trap 2	2	Standard	4	Ballad Bass
A67	Pop10	124	35	Ballad 1	67	Hi Percussion	4	Ballad Bass
A68	Pop11	110	16	Studio 2	------	------------------	1	Studio Bass
A69	Pop12	120	16	Studio 2	31	Epic Rock 2	4	Ballad Bass
A70	Pop13	110	20	Standard 1	24	Standard 5	2	Epic Bass
A71	R&B01	138	26	Funk Trap 2	9	General Drum	18	Lo Sine
A72	R&B02	100	20	Standard 1	67	Hi Percussion	0	Live Bass
A73	R&B03	120	25	Funk Trap 1	------	------------------	0	Live Bass
A74	R&B04	116	23	Standard 4	65	Drum Skins	4	Ballad Bass
A75	R&B05	120	45	Rap/HipHop 1	------	------------------	3	Funk Bass
A76	R&B06	96	28	Funk Trap 4	65	Drum Skins	4	Ballad Bass
A77	R&B07	168	26	Funk Trap 2	25	Funk Trap 1	0	Live Bass
A78	R&B08	100	25	Funk Trap 1	67	Hi Percussion	3	Funk Bass
A79	R&B09	120	3	Funk Trap	------	------------------	2	Epic Bass
A80	R&B10	146	20	Standard 1	0	Live Rock	0	Live Bass
A81	R&B11	112	25	Funk Trap 1	------	------------------	6	Modern Bass
A82	R&B12	114	45	Rap/HipHop 1	69	Single Percussion	18	Lo Sine
A83	R&B13	90	46	Rap/HipHop 2	69	Single Percussion	17	Analog Touch
A84	Funk01	112	2	Standard	3	Funk Trap	3	Funk Bass
A85	Funk02	120	27	Funk Trap 3	------	------------------	3	Funk Bass
A86	Funk03	120	41	Modern 2	2	Standard	3	Funk Bass
A87	Funk04	112	28	Funk Trap 4	2	Standard	3	Funk Bass
A88	Funk05	121	3	Funk Trap	47	Rap/HipHop 3	3	Funk Bass
A89	Funk06	120	27	Funk Trap 3	------	------------------	4	Ballad Bass
A90	Funk07	98	28	Funk Trap 4	10	Live Rock 1	8	Techno Bass
A91	Funk08	94	29	Funk Trap 5	67	Hi Percussion	3	Funk Bass
A92	Funk09	100	25	Funk Trap 1	65	Drum Skins	0	Live Bass
A93	Funk10	92	26	Funk Trap 2	65	Drum Skins	9	Big Bottom Bass
A94	Funk11	112	2	Standard	3	Funk Trap	10	SubSlap Bass
A95	Funk12	99	22	Standard 3	68	Clicks and Sticks	5	Acoustic Bass
A96	Funk13	125	49	Rap/HipHop 5	71	Percussion/SFX	18	Lo Sine
A97	Funk14	92	27	Funk Trap 3	6	Modern	10	SubSlap Bass
A98	Funk15	100	21	Standard 2	67	Hi Percussion	18	Lo Sine
A99	Funk16	114	75	Various Percussion 4	7	Rap/HipHop	17	Analog Touch
B01	RapHipHop01	110	46	Rap/HipHop 2	11	Live Rock 2	18	Lo Sine
B02	RapHipHop02	96	40	Modern 1	77	Cymbal Set	18	Lo Sine
B03	RapHipHop03	102	7	Rap/HipHop	67	Hi Percussion	17	Analog Touch
B04	RapHipHop04	112	3	Funk Trap	------	------------------	14	Acoustic Jazz
B05	RapHipHop05	86	48	Rap/HipHop 4	47	Rap/HipHop 3	8	Techno Bass
B06	RapHipHop06	96	21	Standard 2	67	Hi Percussion	10	SubSlap Bass
B07	RapHipHop07	99	52	Techno Beat 3	24	Standard 5	4	Ballad Bass
B08	RapHipHop08	112	3	Funk Trap	7	Rap/HipHop	5	Acoustic Bass
B09	RapHipHop09	100	7	Rap/HipHop	------	------------------	17	Analog Touch
B10	RapHipHop10	112	7	Rap/HipHop	2	Standard	18	Lo Sine
B11	RapHipHop11	91	8	Techno Beat	2	Standard	0	Live Bass
B12	RapHipHop12	112	3	Funk Trap	2	Standard	4	Ballad Bass
B13	RapHipHop13	112	2	Standard	7	Rap/HipHop	4	Ballad Bass
B14	RapHipHop14	104	62	General Drum 8	67	Hi Percussion	18	Lo Sine
B15	RapHipHop15	112	6	Modern	5	Ballad	4	Ballad Bass
B16	RapHipHop16	88	0	Live Rock	3	Funk Trap	5	Acoustic Bass
B17	RapHipHop17	103	64	Effected Drum	69	Single Percussion	16	Techno Analog
B18	RapHipHop18	93	47	Rap/HipHop 3	20	Standard 1	18	Lo Sine
B19	RapHipHop19	92	7	Rap/HipHop	70	Agogo Gamelan	5	Acoustic Bass
B20	RapHipHop20	84	47	Rap/HipHop 3	31	Epic Rock 2	4	Ballad Bass

B21	RapHipHop21	99	47	Rap/HipHop 3	67	Hi Percussion	4	Ballad Bass
B22	RapHipHop22	88	13	Live Rock 4	8	Techno Beat	4	Ballad Bass
B23	RapHipHop23	88	13	Live Rock 4	47	Rap/HipHop 3	4	Ballad Bass
B24	RapHipHop24	102	51	Techno Beat 2	49	Rap/HipHop 5	18	Lo Sine
B25	RapHipHop25	90	3	Funk Trap	65	Drum Skins	11	Digital Acoustic
B26	RapHipHop26	85	8	Techno Beat	71	Percussion/SFX	18	Lo Sine
B27	RapHipHop27	96	10	Live Rock 1	67	Hi Percussion	8	Techno Bass
B28	RapHipHop28	96	0	Live Rock	71	Percussion/SFX	18	Lo Sine
B29	RapHipHop29	87	62	General Drum 8	71	Percussion/SFX	17	Analog Touch
B30	RapHipHop30	116	59	General Drum 5	------	------------------	17	Analog Touch
B31	RapHipHop31	136	7	Rap/HipHop	69	Single Percussion	17	Analog Touch
B32	RapHipHop32	148	51	Techno Beat 2	2	Standard	17	Analog Touch
B33	RapHipHop33	103	2	Standard	3	Funk Trap	5	Acoustic Bass
B34	RapHipHop34	107	3	Funk Trap	67	Hi Percussion	5	Acoustic Bass
B35	RapHipHop35	120	45	Rap/HipHop 1	27	Funk Trap 3	8	Techno Bass
B36	Dance01	111	8	Techno Beat	2	Standard	8	Techno Bass
B37	Dance02	120	2	Standard	6	Modern	4	Ballad Bass
B38	Dance03	102	26	Funk Trap 2	47	Rap/HipHop 3	4	Ballad Bass
B39	Dance04	107	50	Techno Beat 1	47	Rap/HipHop 3	17	Analog Touch
B40	Dance05	107	50	Techno Beat 1	48	Rap/HipHop 4	17	Analog Touch
B41	Dance06	122	8	Techno Beat	74	Various Percussion 3	8	Techno Bass
B42	Dance07	120	8	Techno Beat	68	Clicks and Sticks	3	Funk Bass
B43	Dance08	180	45	Rap/HipHop 1	74	Various Percussion 3	18	Lo Sine
B44	Dance09	103	43	Modern 4	67	Hi Percussion	18	Lo Sine
B45	Dance10	137	45	Rap/HipHop 1	------	------------------	18	Lo Sine
B46	Dance11	120	6	Modern	67	Hi Percussion	10	SubSlap Bass
B47	Dance12	100	41	Modern 2	76	Various Percussion 5	8	Techno Bass
B48	House01	122	45	Rap/HipHop 1	22	Standard 3	17	Analog Touch
B49	House02	120	45	Rap/HipHop 1	73	Various Percussion 2	18	Lo Sine
B50	House03	120	53	Techno Beat 4	71	Percussion/SFX	16	Techno Analog
B51	House04	126	45	Rap/HipHop 1	68	Clicks and Sticks	18	Lo Sine
B52	House05	120	40	Modern 1	76	Various Percussion 5	8	Techno Bass
B53	House06	120	50	Techno Beat 1	8	Techno Beat	8	Techno Bass
B54	House07	120	41	Modern 2	68	Clicks and Sticks	7	Synth Bass
B55	House08	126	59	General Drum 5	68	Clicks and Sticks	18	Lo Sine
B56	Techno01	148	46	Rap/HipHop 2	50	Techno Beat 1	20	Saw Wave
B57	Techno02	125	8	Techno Beat	54	Techno Beat 5	17	Analog Touch
B58	Techno03	125	8	Techno Beat	54	Techno Beat 5	17	Analog Touch
B59	Techno04	160	49	Rap/HipHop 5	51	Techno Beat 2	8	Techno Bass
B60	Techno05	138	51	Techno Beat 2	68	Clicks and Sticks	18	Lo Sine
B61	Techno06	164	7	Rap/HipHop	68	Clicks and Sticks	18	Lo Sine
B62	Techno07	118	6	Modern	8	Techno Beat	17	Analog Touch
B63	Techno08	126	54	Techno Beat 5	46	Rap/HipHop 2	18	Lo Sine
B64	Techno09	140	45	Rap/HipHop 1	68	Clicks and Sticks	18	Lo Sine
B65	Techno10	136	45	Rap/HipHop 1	68	Clicks and Sticks	18	Lo Sine
B66	Techno11	120	49	Rap/HipHop 5	71	Percussion/SFX	18	Lo Sine
B67	Techno12	119	30	Epic Rock 1	52	Techno Beat 3	17	Analog Touch
B68	Techno13	127	59	General Drum 5	67	Hi Percussion	22	Hi Sine
B69	Techno14	170	61	General Drum 7	71	Percussion/SFX	17	Analog Touch
B70	Techno15	120	51	Techno Beat 2	46	Rap/HipHop 2	2	Epic Bass
B71	Drum&Bass01	150	45	Rap/HipHop 1	46	Rap/HipHop 2	18	Lo Sine
B72	Drum&Bass02	150	26	Funk Trap 2	7	Rap/HipHop	18	Lo Sine
B73	Drum&Bass03	158	46	Rap/HipHop 2	78	Kick and Snare 1	5	Acoustic Bass
B74	Drum&Bass04	166	60	General Drum 6	61	General Drum 7	18	Lo Sine
B75	Drum&Bass05	164	45	Rap/HipHop 1	67	Hi Percussion	18	Lo Sine
B76	Drum&Bass06	144	7	Rap/HipHop	8	Techno Beat	18	Lo Sine
B77	Drum&Bass07	154	7	Rap/HipHop	2	Standard	18	Lo Sine
B78	Drum&Bass08	154	29	Funk Trap 5	65	Drum Skins	18	Lo Sine
B79	Drum&Bass09	154	25	Funk Trap 1	50	Techno Beat 1	5	Acoustic Bass
B80	Drum&Bass10	150	23	Standard 4	20	Standard 1	14	Acoustic Jazz
B81	Drum&Bass11	160	23	Standard 4	50	Techno Beat 1	11	Digital Acoustic

B82	Jungle01	160	45	Rap/HipHop 1	62	General Drum 8	18	Lo Sine
B83	Jungle02	163	61	General Drum 7	66	Lo Percussion	18	Lo Sine
B84	Jungle03	172	41	Modern 2	65	Drum Skins	18	Lo Sine
B85	TripHop01	120	45	Rap/HipHop 1	46	Rap/HipHop 2	5	Acoustic Bass
B86	TripHop02	75	63	General Drum 9	67	Hi Percussion	14	Acoustic Jazz
B87	TripHop03	152	47	Rap/HipHop 3	71	Percussion/SFX	5	Acoustic Bass
B88	TripHop04	83	46	Rap/HipHop 2	7	Rap/HipHop	18	Lo Sine
B89	TripHop05	110	67	Hi Percussion	47	Rap/HipHop 3	8	Techno Bass
B90	TripHop06	101	41	Modern 2	49	Rap/HipHop 5	4	Ballad Bass
B91	TripHop07	101	61	General Drum 7	66	Lo Percussion	13	No Frets
B92	TripHop08	73	44	Modern 5	67	Hi Percussion	10	SubSlap Bass
B93	TripHop09	97	64	Effected Drum	66	Lo Percussion	4	Ballad Bass
B94	Ambient01	112	1	Studio	7	Rap/HipHop	18	Lo Sine
B95	Ambient02	98	60	General Drum 6	68	Clicks and Sticks	4	Ballad Bass
B96	Ambient03	157	46	Rap/HipHop 2	46	Rap/HipHop 2	18	Lo Sine
B97	Ambient04	94	46	Rap/HipHop 2	46	Rap/HipHop 2	17	Analog Touch
B98	Ambient05	89	7	Rap/HipHop	------	------------------	18	Lo Sine
B99	Ambient06	96	7	Rap/HipHop	------	------------------	8	Techno Bass
C01	Ballad01	76	5	Ballad	25	Funk Trap 1	4	Ballad Bass
C02	Ballad02	75	21	Standard 2	77	Cymbal Set	4	Ballad Bass
C03	Ballad03	65	5	Ballad	77	Cymbal Set	4	Ballad Bass
C04	Ballad04	152	0	Live Rock	60	General Drum 6	18	Lo Sine
C05	Ballad05	65	5	Ballad	20	Standard 1	4	Ballad Bass
C06	Ballad06	108	21	Standard 2	78	Kick and Snare 1	0	Live Bass
C07	Ballad07	99	2	Standard	3	Funk Trap	4	Ballad Bass
C08	Ballad08	80	13	Live Rock 4	26	Funk Trap 2	13	No Frets
C09	Ballad09	75	30	Epic Rock 1	------	------------------	4	Ballad Bass
C10	Blues01	120	3	Funk Trap	------	------------------	4	Ballad Bass
C11	Blues02	72	23	Standard 4	2	Standard	4	Ballad Bass
C12	Blues03	120	3	Funk Trap	------	------------------	4	Ballad Bass
C13	Blues04	111	0	Live Rock	67	Hi Percussion	4	Ballad Bass
C14	Blues05	120	3	Funk Trap	------	------------------	4	Ballad Bass
C15	Blues06	111	24	Standard 5	37	Ballad 3	4	Ballad Bass
C16	Blues07	64	35	Ballad 1	19	Studio 5	9	Big Bottom Bass
C17	Triple01	126	20	Standard 1	------	------------------	5	Acoustic Bass
C18	Triple02	102	1	Studio	------	------------------	4	Ballad Bass
C19	Triple03	94	67	Hi Percussion	2	Standard	5	Acoustic Bass
C20	Triple04	105	1	Studio	4	Epic Rock	2	Epic Bass
C21	Triple05	140	14	Live Rock 5	------	------------------	4	Ballad Bass
C22	Country01	120	23	Standard 4	------	------------------	4	Ballad Bass
C23	Country02	120	16	Studio 2	78	Kick and Snare 1	5	Acoustic Bass
C24	Country03	95	2	Standard	------	------------------	4	Ballad Bass
C25	Country04	115	63	General Drum 9	------	------------------	0	Live Bass
C26	Country05	96	20	Standard 1	65	Drum Skins	5	Acoustic Bass
C27	Country06	100	2	Standard	------	------------------	4	Ballad Bass
C28	Jazz01	125	3	Funk Trap	74	Various Percussion 3	5	Acoustic Bass
C29	Jazz02	121	3	Funk Trap	------	------------------	5	Acoustic Bass
C30	Jazz03	94	3	Funk Trap	74	Various Percussion 3	5	Acoustic Bass
C31	Jazz04	100	2	Standard	71	Percussion/SFX	4	Ballad Bass
C32	Jazz05	123	3	Funk Trap	67	Hi Percussion	4	Ballad Bass
C33	Jazz06	123	23	Standard 4	72	Various Percussion 1	5	Acoustic Bass
C34	Shuffle01	125	3	Funk Trap	------	------------------	4	Ballad Bass
C35	Shuffle02	120	0	Live Rock	25	Funk Trap 1	11	Digital Acoustic
C36	Shuffle03	122	26	Funk Trap 2	20	Standard 1	17	Analog Touch
C37	Shuffle04	120	23	Standard 4	65	Drum Skins	1	Studio Bass
C38	Ska01	160	25	Funk Trap 1	73	Various Percussion 2	4	Ballad Bass
C39	Ska02	141	2	Standard	3	Funk Trap	0	Live Bass
C40	Ska03	160	21	Standard 2	67	Hi Percussion	14	Acoustic Jazz
C41	Ska04	150	3	Funk Trap	------	------------------	11	Digital Acoustic
C42	Ska05	130	3	Funk Trap	66	Lo Percussion	4	Ballad Bass
C43	Reggae01	150	25	Funk Trap 1	73	Various Percussion 2	4	Ballad Bass

C44	Reggae02	160	23	Standard 4	67	Hi Percussion	5	Acoustic Bass
C45	Reggae03	132	25	Funk Trap 1	67	Hi Percussion	4	Ballad Bass
C46	Reggae04	118	21	Standard 2	16	Studio 2	4	Ballad Bass
C47	Reggae05	161	3	Funk Trap	------	------------------	4	Ballad Bass
C48	Reggae06	129	3	Funk Trap	74	Various Percussion 3	5	Acoustic Bass
C49	Reggae07	149	56	General Drum 2	67	Hi Percussion	18	Lo Sine
C50	Reggae08	71	41	Modern 2	67	Hi Percussion	17	Analog Touch
C51	Afro01	98	73	Various Percussion 2	66	Lo Percussion	13	No Frets
C52	Afro02	142	41	Modern 2	21	Standard 2	4	Ballad Bass
C53	Afro03	97	25	Funk Trap 1	65	Drum Skins	3	Funk Bass
C54	Afro04	115	25	Funk Trap 1	66	Lo Percussion	3	Funk Bass
C55	Afro05	111	25	Funk Trap 1	65	Drum Skins	2	Epic Bass
C56	Afro06	106	22	Standard 3	73	Various Percussion 2	3	Funk Bass
C57	Afro07	95	29	Funk Trap 5	67	Hi Percussion	6	Modern Bass
C58	Afro08	92	67	Hi Percussion	66	Lo Percussion	4	Ballad Bass
C59	Afro09	115	66	Lo Percussion	78	Kick and Snare 1	18	Lo Sine
C60	Afro10	123	3	Funk Trap	66	Lo Percussion	4	Ballad Bass
C61	Afro11	116	48	Rap/HipHop 4	66	Lo Percussion	18	Lo Sine
C62	Afro12	106	67	Hi Percussion	66	Lo Percussion	5	Acoustic Bass
C63	Latin01	118	21	Standard 2	74	Various Percussion 3	4	Ballad Bass
C64	Latin02	150	3	Funk Trap	2	Standard	5	Acoustic Bass
C65	Latin03	104	25	Funk Trap 1	71	Percussion/SFX	4	Ballad Bass
C66	Latin04	106	65	Drum Skins	67	Hi Percussion	11	Digital Acoustic
C67	Latin05	100	6	Modern	74	Various Percussion 3	14	Acoustic Jazz
C68	Latin06	100	65	Drum Skins	67	Hi Percussion	5	Acoustic Bass
C69	Latin07	120	16	Studio 2	2	Standard	5	Acoustic Bass
C70	Latin08	78	76	Various Percussion 5	73	Various Percussion 2	4	Ballad Bass
C71	Latin09	110	25	Funk Trap 1	65	Drum Skins	3	Funk Bass
C72	Latin10	88	72	Various Percussion 1	74	Various Percussion 3	4	Ballad Bass
C73	Latin11	141	22	Standard 3	74	Various Percussion 3	4	Ballad Bass
C74	Latin12	109	1	Studio	67	Hi Percussion	4	Ballad Bass
C75	Latin13	100	26	Funk Trap 2	------	------------------	3	Funk Bass
C76	MiddleEast01	120	25	Funk Trap 1	65	Drum Skins	6	Modern Bass
C77	MiddleEast02	112	2	Standard	66	Lo Percussion	4	Ballad Bass
C78	MiddleEast03	106	23	Standard 4	67	Hi Percussion	4	Ballad Bass
C79	Celtic01	122	2	Standard	66	Lo Percussion	5	Acoustic Bass
C80	Celtic02	136	26	Funk Trap 2	39	Ballad 5	4	Ballad Bass
C81	Polyrhythm01	100	66	Lo Percussion	67	Hi Percussion	22	Hi Sine
C82	Polyrhythm02	100	66	Lo Percussion	67	Hi Percussion	19	Harmonics Bass
C83	Riff01	132	0	Live Rock	------	------------------	------	---------------
C84	Riff02	114	0	Live Rock	------	------------------	------	---------------
C85	Riff03	114	1	Studio	------	------------------	------	---------------
C86	Riff04	114	1	Studio	------	------------------	------	---------------
C87	Arpeggio01	110	------	------------------	------	------------------	12	Bass Harmonics
C88	Arpeggio02	110	70	Agogo Gamelan	------	------------------	------	---------------
C89	PercussionPart01	110	------	------------------	65	Drum Skins	------	---------------
C90	PercussionPart02	110	66	Lo Percussion	------	------------------	------	---------------
C91	PercussionPart03	110	------	------------------	67	Hi Percussion	------	---------------
C92	BD&SDPart	110	34	Epic Rock 5	------	------------------	------	---------------
C93	HiHatPart	110	------	------------------	20	Standard 1	------	---------------
C94	Click&CymbalPar	110	------	------------------	8	Techno Beat	------	---------------
C95	TambarinePart	110	67	Hi Percussion	------	------------------	------	---------------
C96	HeavyDrumPatter	110	1	Studio	------	------------------	------	---------------
C97	SpeedDrumPatter	110	6	Modern	------	------------------	------	---------------
C98	SlapBassPattern	120	------	------------------	------	------------------	3	Funk Bass
C99	FingerBassPatte	110	------	------------------	------	------------------	4	Ballad Bass

ZOOM RhythmTrak RT-123 Note Number Table



	Note No	DRUM A,B KIT 00 - 64	DRUM A,B KIT 65 - PERCUSS & SE	BASS Programs 00 - 24
C2	24			From Note 0
	25			
	26			
	27	High Q	←	
	28	Slap	←	
	29	Scratch Push	←	
	30	Scratch Pull	←	
	31	Sticks	←	
	32	Square Click	←	
	33	Metronome Click	←	
	34	Metronome Bell	←	
	35	Kick Drum 2		
C3	36	Kick Drum 1	PAD 1	
	37	Side Stick	PAD 2	
	38	Snare Drum 1	PAD 3	
	39	Hand Clap	PAD 4	
	40	Snare Drum 2	PAD 5	BASS sound source range
	41	Low Tom 2	PAD 6	
	42	Closed Hi-Hat	PAD 7	
	43	Low Tom 1	PAD 8	
	44	Pedal Hi-Hat	PAD 9	
	45	Mid Tom 2	PAD 10	
	46	Open Hi-Hat	PAD 11	
	47	Mid Tom 1	PAD 12	
C4	48	High Tom 2	PAD 13	
	49	Crash Cymbal 1		
	50	High Tom 1		
	51	Ride Cymbal 1		
	52	Chinese Cymbal		
	53	Ride Bell		
	54	Tambourine		
	55	Splash Cymbal		
	56	Cowbell		
	57	Crash Cymbal 2		
	58	Vibraslap	←	
	59	Ride Cymbal 2	←	
C5	60	High Bongo	←	
	61	Low Bongo	←	
	62	Mute High Conga	←	
	63	Open High Conga	←	
	64	Low Conga	←	
	65	High Timbale	←	
	66	Low Timbale	←	
	67	High Agogo	←	
	68	Low Agogo	←	↓
	69	Cabasa	←	
	70	Maracas	←	
	71	Short Whistle	←	
C6	72	Long Whistle	←	
	73	Short Guiro	←	
	74	Long Guiro	←	
	75	Claves	←	
	76	High Wood Block	←	
	77	Low Wood Block	←	
	78	Mute Cuica	←	
	79	Open Cuica	←	
	80	Mute Triangle	←	
	81	Open Triangle	←	
	82	Shaker	←	
	83	Jingle Bell	←	
C7	84	Belltree	←	
	85	Castanets	←	
	86	Mute Surdo	←	
	87	Open Surdo	←	
	88			

For some bass programs, the upper sound source note # changes.

DRUM A,B KIT 65 -

PERCUSS & SE

KIT No		KIT 65	KIT 66	KIT 67	KIT 68	KIT 69	KIT 70
KIT NAME		Drum Skins	Lo Percussion	Hi Percussion	Clicks and Sticks	Single Percussion	Agogo Gamelan
note	PAD						
36	PAD 1	Hi Conga 1	Lo Timbale	Agogo	LiveStick	Belltree	Agogo Gamelan C
37	PAD 2	Hi Conga 2	Lo Conga 1	LooseShaker 1	StudioSticks	Hi Belltree	Agogo Gamelan C#
38	PAD 3	Lo Conga 1	Lo Conga 2	Cowbell	X-Sticks	Jinglebells	Agogo Gamelan D
39	PAD 4	Lo Conga 2	Hi Conga 1	LooseShaker 2	GuiroTick	Hi Jinglebells	Agogo Gamelan D#
40	PAD 5	Mute Conga 1	VeryLo Conga 1	Clave	Clave 1	Whistle	Agogo Gamelan E
41	PAD 6	Mute Conga 2	Muted Conga	TightShaker	Clave 2	Hi Whistle	Agogo Gamelan F
42	PAD 7	Lo Conga 3	VeryLo Conga 2	GuiroScrape 1	Castenet 1	Vibraslap	Agogo Gamelan F#
43	PAD 8	Lo Timbale	Bass	Tamborine 1	909WoodTick 1	Muted Triangle 1	Agogo Gamelan G
44	PAD 9	Hi Bongo	Mid Conga	GuiroScrape 2	Castanet 2	Hi Vibraslap	Agogo Gamelan G#
45	PAD 10	Hi Timbale	Lo Conga 3	Tamborine 2	909WoodTick 2	Lo Muted Triangle	Agogo Gamelan A
46	PAD 11	Lo Bongo	Lo Conga 4	GuiroTick	Castanet 3	VeryHi Vibraslap	Agogo Gamelan A#
47	PAD 12	Stick	Lo Stick	Tamborine 3	909WoodTick 3	Muted Triangle 2	Agogo Gamelan B
48	PAD 13	HandTom	HandTom	Vibraslap	StudioSticks	Lo Open Triangle	Agogo Gamelan C 2

KIT No		KIT 71	KIT 72	KIT 73	KIT 74	KIT 75	KIT 76
KIT NAME		Percussion/SFX	Various Percussion 1	Various Percussion 2	Various Percussion 3	Various Percussion 4	Various Percussion 5
note	PAD						
36	PAD 1	Mute High Conga	<----	<----	<----	<----	<----
37	PAD 2	Open High Conga	<----	<----	<----	<----	<----
38	PAD 3	Low Conga	<----	<----	<----	<----	<----
39	PAD 4	Hand Clap	<----	<----	<----	<----	<----
40	PAD 5	Pedal Hi-Hat	<----	<----	<----	<----	<----
41	PAD 6	Chinese Cymbal	<----	<----	<----	<----	<----
42	PAD 7	Crash Cymbal 2	<----	<----	<----	<----	<----
43	PAD 8	High Q	Metronome Click	High Bongo	Cabasa	High Woodblock	Shaker
44	PAD 9	Slap	Metronome Bell	Lo Bongo	Maracas	Lo Woodblock	Jingle Bell
45	PAD 10	Scratch Push	Splash Cymbal	High Timbale	Short Hi Whistle	Mute Cuica	Belltree
46	PAD 11	Scratch Pull	Vibraslap	Lo Timbale	Long Low Whistle	Open Cuica	Castanets
47	PAD 12	Sticks	Ride Cymbal 2	High Agogo	Short Guiro	Mute Triangle	Mute Surdo
48	PAD 13	Square Click	Claves	Lo Agogo	Long Guiro	Open Triangle	Open Surdo

KIT No		KIT 77	KIT 78	KIT 79
KIT NAME		Cymbal Set	Kick and Snare 1	Kick and Snare 2
note	PAD			
36	PAD 1	Live Splash	Live Kick 1	Epic Kick 1
37	PAD 2	Funk Splash	Live Snare 1	Epic Snare 1
38	PAD 3	Dance Splash	Live Kick 2	Epic Kick 2
39	PAD 4	Techno Splash	Live Snare 2	Epic Snare 2
40	PAD 5	Funk China	Studio Kick 1	Ballad Kick
41	PAD 6	Dance China	Studio Snare 1	Modern Snare
42	PAD 7	Funk and Live Crash	Studio Kick 2	Modern Kick 1
43	PAD 8	Epic and Studio Crash	Studio Snare 2	General Snare 1
44	PAD 9	Techno 808 Crash	Standard Kick 1	Modern Kick 2
45	PAD 10	Ride Cymbal 2	Funk Snare 1	General Snare 2
46	PAD 11	Epic Tamborine	Standard Kick 2	General Kick
47	PAD 12	Studio Tamborine	Funk Snare 2	Kick Verb
48	PAD 13	Cabasa	Funk Kick	Snare Verb

Drum A, B KIT (0 - 64) EXTRA List

KIT No	KIT NAME	EXTRA1	EXTRA2	EXTRA CYMBAL	EXTRA3
0	LiveRock	Side Stick	Cowbell	Ride Bell	Hand Clap
1	Studio Rock	Side Stick	Cowbell	Ride Bell	Hand Clap
2	Standard Kit	Side Stick	Cowbell	Ride Bell	Hand Clap
3	Funk Rock	Side Stick	Cowbell	Ride Bell	Hand Clap
4	Epic Rock	Side Stick	Cowbell	Ride Bell	Hand Clap
5	Ballad Rock	Side Stick	Cowbell	Ride Bell	Hand Clap
6	Dance Rock	Side Stick	Cowbell	Ride Bell	Hand Clap
7	RapHipHop	Side Stick	Cowbell	Ride Bell	Hand Clap
8	Techno Beat	Side Stick	Cowbell	Ride Bell	Hand Clap
9	General Drum	Side Stick	Cowbell	Ride Bell	Hand Clap
10	LiveRock1	Hand Clap	Cowbell	Ride Bell	Tambourine
11	LiveRock2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
12	LiveRock3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
13	LiveRock4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
14	LiveRock5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
15	Studio Rock1	Hand Clap	Cowbell	Ride Bell	Tambourine
16	Studio Rock2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
17	Studio Rock3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
18	Studio Rock4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
19	Studio Rock5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
20	Standard Kit1	Hand Clap	Cowbell	Ride Bell	Tambourine
21	Standard Kit2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
22	Standard Kit3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
23	Standard Kit4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
24	Standard Kit5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
25	Funk Rock1	Hand Clap	Cowbell	Ride Bell	Tambourine
26	Funk Rock2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
27	Funk Rock3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
28	Funk Rock4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
29	Funk Rock5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
30	Epic Rock1	Hand Clap	Cowbell	Ride Bell	Tambourine
31	Epic Rock2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
32	Epic Rock3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
33	Epic Rock4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
34	Epic Rock5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
35	Ballad Rock1	Hand Clap	Cowbell	Ride Bell	Tambourine
36	Ballad Rock2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
37	Ballad Rock3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
38	Ballad Rock4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
39	Ballad Rock5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
40	Dance Rock1	Hand Clap	Cowbell	Ride Bell	Tambourine
41	Dance Rock2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
42	Dance Rock3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
43	Dance Rock4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
44	Dance Rock5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
45	RapHipHop1	Hand Clap	Cowbell	Ride Bell	Tambourine
46	RapHipHop2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
47	RapHipHop3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
48	RapHipHop4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
49	RapHipHop5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
50	Techno Beat1	Hand Clap	Cowbell	Ride Bell	Tambourine
51	Techno Beat2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
52	Techno Beat3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
53	Techno Beat4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
54	Techno Beat5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
55	General Drum 1	Hand Clap	Cowbell	Ride Bell	Tambourine
56	General Drum 2	Side Stick	Cowbell	Crash Cymbal2	Tambourine
57	General Drum 3	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
58	General Drum 4	Side Stick	Hand Clap	Splash Cymbal	Tambourine
59	General Drum 5	Hand Clap	Tambourine	Crash Cymbal2	Splash Cymbal
60	General Drum 6	Hand Clap	Cowbell	Ride Bell	Tambourine
61	General Drum 7	Side Stick	Cowbell	Crash Cymbal2	Tambourine
62	General Drum 8	Cowbell	Chinese Cymbal	Ride Bell	Splash Cymbal
63	General Drum 9	Side Stick	Hand Clap	Splash Cymbal	Tambourine
64	Effected Drum	Side Stick	Cowbell	Ride Bell	Tambourine

ZOOM RhythmTrak RT-123 MIDI Implementation

1.TRANSMITTED DATA

NONE.

2.RECOGNIZED DATA

1) CHANNEL VOICE MESSAGES

STATUS	SECOND	THIRD	DESCRIOTION
1000 nnnn	0kkk kkkk	0vvv vvvv	NOTE OFF (See NOTE 1) kkk kkkk : Note No. vvv vvvv : Note Off Velocity (ignored)
1001 nnnn	0kkk kkkk	0000 0000	NOTE OFF (See NOTE 1) kkk kkkk : Note No.
1001 nnnn	0kkk kkkk	0vvv vvvv	NOTE ON (See NOTE 1) kkk kkkk : Note No. vvv vvvv : Note On Velocity (not 0)
1011 nnnn	0ccc cccc	0vvv vvvv	CONTROL CHANGE ccc cccc : Control No. 7 Volume 10 Panpot (See NOTE 3) vvv vvvv : Control Value
1100 nnnn	0ppp pppp	—— ——	PROGRAM CHANGE ppp pppp : Program Number (See NOTE 2)
1110 nnnn	0vvv vvvv	0vvv vvvv	PITCH BENDER CHANGE (See NOTE 3) vvv vvvv vvv vvvv Pitch Bend Value

NOTE: nnnn = MIDI Channel Number (0000 - 1111)

1. Note Off Messages on Drum Channel(s) will be ignored.
2. Relationship between Program Numbers and Kit Numbers are assigned as described in Drum Kits/Bass Program List.
3. Pitch Bend values will be used only MS7bits.
   Pitch Bending will be effected continuously only on Bass Channel.
   Panpot Controller will also be effected only on Bass Channel.

2) CHANNEL MODE MESSAGE

STATUS	SECOND	THIRD	DESCRIPTION
1011 nnnn	0111 1000	0000 0000	ALL SOUNDS OFF
1011 nnnn	0111 1001	0000 0000	RESET ALL CONTROLLERS
1011 nnnn	0111 1011	0000 0000	ALL NOTES OFF
1011 nnnn	0111 1100	0000 0000	ALL NOTES OFF

NOTE: nnnn = MIDI Channel Number (0000 - 1111)

3) SYSTEM COMMON MESSAGE,SYSTEM REAL TIME MESSAGE

STATUS	SECOND	THIRD	DESCRIPTION
1111 0011	0sss ssss	—— ——	SONG SELECT sss ssss : Song No. 0-98
1111 1000	—— ——	—— ——	TIMING CLOCK
1111 1010	—— ——	—— ——	START
1111 1011	—— ——	—— ——	CONTINUE
1111 1100	—— ——	—— ——	STOP

NOTE:

[MultiTrack Rhythm Machine]   Date :1999.01.14
Model RhythmTrak RT-123 MIDI Implementation Chart   Version :1.00

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default		1-16	Memorized
	Changed		1-16	for every tracks
Mode	Default		3	
	Messages			
	Altered	******************		
Note Number			0-127	
	True voice	******************		
Velocity	Note ON		o	
	Note OFF		x	
After Touch	Key's		x	
	Ch's		x	
Pitch Bend			o	MS7bits
Control Change			7	Volume
			10	Panpot (*1)
			120	All Sounds Off
			121	Reset All Ctrls
Prog Change			o 0-127	
	True #	******************		
System Exclusive			x	
System Common	Song Pos		x	
	Song Sel		o	
	Tune		x	
System Real Time	Clock		o	
	Commands		o	
Aux Mes-sages	Local ON/OFF		x	
	All Notes OFF		o	
	Active Sense		x	
	Reset		x	
Notes	No transmitted messages. *1: Bass only			

Mode 1 : OMNI ON, POLY   Mode 2 : OMNI ON, MONO   o : Yes
Mode 3 : OMNI OFF, POLY   Mode 3 : OMNI OFF, MONO   x : No

CATCH US IF YOU CAN

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